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1919-1920

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CALENDAR 1919-1920

Vacations and Holidays occurring within the Academic Year 1919-20 are indicated by dark type.

1919	1920	1920
SEPT.	MAR.	SEPT.
S M T W T F S	S M T W T F S	S M T W T F S
.. 1 2 3 4 5 6	.. 1 2 3 4 5 6 1 2 3 4
7 8 9 10 11 12 13	7 8 9 10 11 12 13	5 6 7 8 9 10 11
14 15 16 17 18 19 20	14 15 16 17 18 19 20	12 13 14 15 16 17 18
21 22 23 24 25 26 27	21 22 23 24 25 26 27	19 20 21 22 23 24 25
28 29 30	28 29 30 31	26 27 28 29 30 . . .
OCT.	APR.	OCT.
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19 20 21 22 23 24 25	18 19 20 21 22 23 24	17 18 19 20 21 22 23
26 27 28 29 30 31 ..	25 26 27 28 29 30 ..	24 25 26 27 28 29 30
..	31
NOV.	MAY	NOV.
.. 1 1	.. 1 2 3 4 5 6
2 3 4 5 6 7 8	2 3 4 5 6 7 8	7 8 9 10 11 12 13
9 10 11 12 13 14 15	9 10 11 12 13 14 15	14 15 16 17 18 19 20
16 17 18 19 20 21 22	16 17 18 19 20 21 22	21 22 23 24 25 26 27
23 24 25 26 27 28 29	23 24 25 26 27 28 29	28 29 30
30	30 31
DEC.	JUNE	DEC.
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14 15 16 17 18 19 20	13 14 15 16 17 18 19	12 13 14 15 16 17 18
21 22 23 24 25 26 27	20 21 22 23 24 25 26	19 20 21 22 23 24 25
28 29 30 31	27 28 29 30	26 27 28 29 30 31 ..
JAN. 1920	JULY	JAN. 1921
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11 12 13 14 15 16 17	11 12 13 14 15 16 17	9 10 11 12 13 14 15
18 19 20 21 22 23 24	18 19 20 21 22 23 24	16 17 18 19 20 21 22
25 26 27 28 29 30 31	25 26 27 28 29 30 31	23 24 25 26 27 28 29
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FEB.	AUG.	FEB.
1 2 3 4 5 6 7	1 2 3 4 5 6 7 1 2 3 4 5
8 9 10 11 12 13 14	8 9 10 11 12 13 14	6 7 8 9 10 11 12
15 16 17 18 19 20 21	15 16 17 18 19 20 21	13 14 15 16 17 18 19
22 23 24 25 26 27 28	22 23 24 25 26 27 28	20 21 22 23 24 25 26
29	29 30 31	27 28

THE UNIVERSITY CALENDAR 1919-1920

1919

- SEPTEMBER 3. *Wednesday.* Annual Meeting of the Corporation (first Wednesday in September).
- SEPTEMBER 16-22. *Tuesday to Monday, inclusive.* Examinations for admission to the Freshman class and to advanced standing.
- SEPTEMBER 22, 23. *Monday and Tuesday.* Registration of new students and enrolment of students previously in residence.
- SEPTEMBER 24. *Wednesday, 9 a.m.* ACADEMIC YEAR BEGINS (fourth Wednesday in September). Registration and enrolment of Graduate students at the Registrar's office.
- OCTOBER 1. *Wednesday.* Examination in Greek for the President's Premiums, 2 Sayles Hall, 2.30 p.m.
- OCTOBER 8. *Wednesday.* Examination in Latin for the President's Premiums, 1 Sayles Hall, 2.30 p.m.
- OCTOBER 15. *Wednesday.* Examination in Mathematics for the Hartshorn Premiums, 26 Wilson Hall, 2 p.m. Meeting of the Corporation.
- OCTOBER 22. *Wednesday.* Examination in French for the Hicks Premiums, 1 Sayles Hall, 2.30 p.m.
- OCTOBER 29. *Wednesday.* Examination in German for the Caesar Misch Premiums, 5 Sayles Hall, 2.30 p.m.
- NOVEMBER 27. *Thursday.* Thanksgiving Day. No University exercises.
- DECEMBER 2. *Tuesday.* Preliminary discussion for the Class of 1880 Prizes.
- DECEMBER 4. *Thursday.* Last day for receiving essays submitted in competition for the Class of 1880 Prizes.
- DECEMBER 9. *Tuesday.* Public discussion for the Class of 1880 Prizes.
- DECEMBER 20. *Saturday. 1.10 p.m.* CHRISTMAS RECESS BEGINS.

1920

- JANUARY 4. *Sunday.* CHRISTMAS RECESS ENDS.
- JANUARY 5. *Monday,* 8 a.m. Recitations begin.
- JANUARY 15. *Thursday.* Last day for receiving applications for examinations to remove entrance conditions.
- JANUARY 21. *Wednesday.* Last day for applications of competitors for the Carpenter Prizes in Elocution.
- JANUARY 21-30. *Wednesday to Friday, inclusive.* Semester examinations.
- JAN. 27 to FEB. 2. *Tuesday to Monday.* Mid-year examinations for admission to the Freshman class.
- JAN. 31 to FEB. 3. *Saturday to Tuesday, inclusive.* MID-YEAR RECESS.
- FEBRUARY 3. *Tuesday.* Enrolment of Undergraduate students and candidates for admission to the Freshman class.
- FEBRUARY 4. *Wednesday,* 8 a.m. SECOND SEMESTER BEGINS. Enrolment of Graduate students at the Registrar's office.
- FEBRUARY 16. *Monday.* Last day for applications of competitors for the Peace Society Prizes.
- MARCH 1. *Monday.* Last day for applications of competitors for the Bishop McVickar Prizes.
Last day for applications of competitors for the Society of Colonial Dames Prize.
- MARCH 24. *Wednesday.* Last day for receiving essays submitted in competition for the Gaston Prize Medal.
- APRIL 1. *Thursday.* Last day for receiving applications for examination for the degree of Doctor of Philosophy.
- APRIL 2-5. *Friday to Monday, inclusive.* SPRING RECESS.
- APRIL 6. *Tuesday,* 8 a.m. Recitations begin.
- APRIL 15. *Thursday.* Last day for receiving applications for the Grand Army of the Republic Fellowship.

- APRIL 15. *Thursday.* Last day for receiving theses of candidates for the degree of Doctor of Philosophy.
- APRIL 20. *Tuesday.* Carpenter Prize Speaking Competition.
- MAY 1. *Saturday.* Last day for receiving essays submitted in competition for the Bishop McVickar Prizes.
- MAY 5. *Wednesday.* Examination in Greek for the Foster Premium.
Meeting of the Board of Fellows.
- MAY 8. *Saturday.* Last day for receiving essays submitted in competition for the Society of Colonial Dames Prize.
- MAY 11. *Tuesday.* Hicks Prize Debate.
- MAY 18. *Tuesday.* Gaston Prize Medal Competition.
- MAY 19. *Wednesday.* Examination in Latin for the Lucius Lyon Premiums.
- MAY 31. *Monday.* Last day for examinations for the degree of Doctor of Philosophy.
- JUNE 1. *Tuesday.* Last day for receiving essays submitted in competition for the Class of 1873 Prize.
- JUNE 2-11. *Wednesday to Friday, inclusive.* Semester examinations.
- JUNE 13. *Sunday.* Baccalaureate Sermon, First Baptist Meeting House, 4.30 p.m.
- JUNE 14. *Monday.* Class Day.
- JUNE 15. *Tuesday.* Annual Meeting of the Phi Beta Kappa Society, Administration Building, 9.30 a.m.
Meeting of the Board of Fellows.
Annual Meeting of the Associated Alumni.
Ivy Day, Pembroke Hall.
- JUNE 16. *Wednesday.* ONE HUNDRED AND FIFTY-SECOND ANNUAL COMMENCEMENT (third Wednesday in June), First Baptist Meeting House, 10 a.m.
- JUNE 17. *Thursday.* Meeting of the Corporation.

JUNE 17 to SEPT. 21. SUMMER VACATION.

SEPTEMBER 1. *Wednesday.* Annual meeting of the Corporation (first Wednesday in September).

SEPTEMBER 14-20. *Tuesday to Monday, inclusive.* Examinations for admission to the Freshman class and to advanced standing.

SEPTEMBER 20, 21. *Monday and Tuesday.* Registration of new students and enrolment of students previously in residence.

SEPTEMBER 22. *Wednesday, 9 a.m.* ACADEMIC YEAR BEGINS (fourth Wednesday in September).

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HERBERT FRANKLIN DAVISON, A.M.	41 Sumner Street, Pawtucket
<i>Assistant Professor of Chemistry</i>	
SYDNEY WILMOT, Sc.B., A.M.	63 Elmgrove Avenue
<i>Assistant Professor of Applied Mechanics</i>	
JOHN SHAPLEY, PH.D.	214 Huntington Avenue, Boston, Mass.
<i>Assistant Professor of Art</i>	
RICHARD MONTGOMERY FIELD, PH.D.	16 Alveston Street, Jamaica Plain, Mass.
<i>Assistant Professor of Geology</i>	
ROBERT WILBUR BURGESS, PH.D.	65 Charles Field Street
<i>Assistant Professor of Mathematics</i>	
RAY EDWIN GILMAN, PH.D.	654 Hope Street
<i>Assistant Professor of Mathematics</i>	
FLOYD LAMAR VAUGHAN, A.M.	120 Waterman Street
<i>Assistant Professor of Economics</i>	

EDOUARD R. MASSEY, B. ÈS LETTRES <i>Instructor in French</i>	203 University Avenue
MYRON WHITMARSH FINCH, Sc.B. <i>Instructor in Physical Training</i>	195 Morris Avenue
KENNETH OLIVER MASON, A.M. <i>Instructor in English</i>	Brown University
FREDERICK NEALE TOMPKINS, Sc.B. <i>Instructor in Electrical Engineering</i>	35 White Street, Pawtucket
ALBERT EDWARD DILLINGHAM, Ph.B. <i>Instructor in Chemistry</i>	14 Brunonia Hall
CLARENCE RAYMOND ADAMS, A.B. <i>Instructor in Mathematics</i>	17 Glenwood Avenue, Eden Park
ALBERT EDWARD RAND, Ph.D. <i>Instructor in French</i>	134 Lloyd Avenue
RAYMOND ABNER PRESTON, A.M. <i>Instructor in English</i>	22 University Hall
CARROLL WILBUR DODGE, Ph.D. <i>Instructor in Botany</i>	238 Gano Street
WILLIAM RODERICK SHERMAN, A.M. <i>Instructor in Economics</i>	7 Congdon Street
CLAUS EMANUEL EKSTROM, A.M. <i>Instructor in Education</i>	70 Seamans Street
HAROLD IRVING LONG, A.M. <i>Instructor in English</i>	167 Eastwood Avenue
ALTON CHARLES CHICK, Sc.B. <i>Instructor in Mechanical Engineering</i>	261 Thayer Street
EUGENE WILLIAM O'BRIEN, Sc.B. <i>Instructor in Engineering</i>	279 Benefit Street
ARCHIE HAHN, LL.B. <i>Instructor in Physical Training</i>	Brown University

INSTRUCTORS IN THE WOMEN'S COLLEGE

HELEN BARNES WHITING, A.M. <i>Instructor in Biology in the Women's College</i>	118 Cushing Street
NELLIE EILEEN BUSSELL, A.B. <i>Director of Hygiene and Physical Education in the Women's College</i>	118 Cushing Street

OTHER OFFICERS OF INSTRUCTION
AND ADMINISTRATION

LECTURERS AND DEMONSTRATORS

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<i>Lecturer in Music</i>	
MARION EMMETT BRATCHER, PH.D.	38 Benevolent Street
<i>Lecturer in Biblical Literature and History</i>	
ARTHUR LLOYD PHILBRICK, PH.B.	325 Angell Street
<i>Lecturer in Economics</i>	
ARTHUR EDWIN NORTON, PH.B.	Cambridge, Mass.
<i>Lecturer in Mechanical Engineering</i>	
JOHN BURNHAM FERGUSON, A.B., M.D.	369 Broad Street
<i>Demonstrator in Anatomy</i>	
JAMES FRANKLIN COLLINS, PH.B.	468 Hope Street
<i>Demonstrator in Botany</i>	

ASSISTANTS

WILLIAM WALKER RUSSELL, PH.B.	East Providence
<i>Assistant in Chemistry</i>	
JAMES WALTER WILSON, PH.B.	Brown University
<i>Assistant in Biology</i>	
ROSS HADLEY	568 Power Road, Pawtucket
<i>Assistant in Pattern Making</i>	
ROSS ELMER BROWNING	Brown University
<i>Assistant in Physical Training</i>	
GEORGE FRANKLIN HERRICK	Brown University
<i>Assistant in Physical Training</i>	
HENRY WEEDEN UNDERWOOD, PH.D.	Brown University
<i>Research Fellow in Chemistry</i>	
BENJAMIN MALCOLM HARRIS, B.D., A.M.	25 Bracken Street, Arlington
<i>Assistant in Philosophy</i>	
FRANCIS LLOYD SIMONS, PH.B.	322 Maxcy Hall
<i>Assistant in Chemistry</i>	
JOSEPH BUTTERWORTH, JR., A.B.	18 University Hall
<i>Assistant in English</i>	
HOWARD FRANKLIN SHAWCROSS, PH.B.	279 Benefit Street
<i>Assistant in English</i>	
SIDNEY RUSSELL GAIR, PH.B.	32 University Hall
<i>Assistant in English</i>	

BROWN UNIVERSITY

ADMINISTRATIVE OFFICERS

EDWIN AYLSWORTH BURLINGAME, Sc.B.	15 Manning Street
<i>Comptroller and Superintendent of Grounds and Buildings</i>	
THOMAS BAIRD APPEGET, Ph.B.	175 Thayer Street
<i>Executive Secretary</i>	
SAMUEL WATSON SMITH, Ph.B.	54 College Street
<i>Assistant Executive Secretary</i>	
EMMA BRADFORD STANTON, A.M.	706 Hope Street, Bristol
<i>Registrar of the Women's College</i>	
SUSAN EMMA HILL	238 Gano Street
<i>Assistant Registrar</i>	
JOHN HENRY ASHTON	46 Pitman Street
<i>Assistant Superintendent of Grounds and Buildings</i>	

LIBRARY STAFF

FRANCIS KEESE WYNKOOP DRURY, A.M., B.L.S.	
<i>Assistant Librarian</i>	184 Waterman Street
PHEBE PARKER, A.B.	5 Congdon Street
<i>Cataloguer</i>	
EDITH RICHMOND BLANCHARD, A.M.	591 Angell Street
<i>Reference Librarian</i>	
MABEL EDITH SUNDERLAND	Old Barrington Road, East Providence
<i>Assistant Cataloguer</i>	
EDITH MARIE LINNÉA CARLBORG, A.M.	124 Atlantic Avenue
<i>Special Cataloguer in History</i>	
SARAH IDE SHEPARD, A.B.	2585 Pawtucket Avenue, East Providence
<i>Serial Clerk</i>	
DOROTHY FOSTER, A.B.	64 Beckwith Street, Auburn
<i>Keeper of Department Libraries</i>	
GRACE THOMAS GRISWOLD	196 Blackstone Boulevard
<i>Loan Desk Assistant</i>	
HOPE PEIRCE LITCHFIELD	30 Beckwith Street, Auburn
<i>Order Clerk</i>	
GERTRUDE ELIZABETH ROBSON, Sc.B.	441 Angell Street
<i>Assistant Librarian of the John Carter Brown Library</i>	
ELEANOR STUART UPTON, A.M.	30 Forest Street
<i>Cataloguer in the John Carter Brown Library</i>	

GENE WILDER WARE, A.B.

72 Charles Field Street

Organist and Director of Chapel Music

RAYMOND GILBERT BUGBEE, M.D.

223 Thayer Street

Physician to the University

STANDING COMMITTEES OF THE FACULTY

ON REGISTRATION AND ATTENDANCE

Dean RANDALL, Professors DELABARRE, HILL, FOWLER, HUNTINGTON, HUNKINS, and SMITH, Dean KING, Mr. GUILD.

SUB-COMMITTEE ON EDUCATIONAL ADVICE AND DIRECTION

Professors COLVIN, HILL, FOWLER, HUNTINGTON, WALTER, RICHARDSON, JONES, SMITH, CURRIER, ARNOLD, and SLOCUM.

ON THE CURRICULUM

Professors HARKNESS, GARDNER, RANDALL, EVERETT, COLVIN, RICHARDSON, and SIOUSSAT.

ON STUDENT ORGANIZATIONS

Professors DELABARRE, HILL, POTTER, MARVEL, BENEDICT, and ARNOLD.

ON SCHEDULES

Mr. GUILD, Professors HILL, GORHAM, and T. H. BROWN.

ON UNIVERSITY EXTENSION

Professors JACOBS, DEALEY, KENERSON, WALTER, JONES, and VAUGHAN.

ON PRIZES AND ACADEMIC HONORS

Professors HASTINGS, P. H. MITCHELL, and BUCKLIN.

ON LIBRARY

Professors MEAD, COLLIER, and COLVIN.

ON DEGREES OUT OF COURSE

Professors HARKNESS, RANDALL, BRONSON, DEALEY, and GREENE.

ON COÖPERATION BETWEEN CORPORATION AND FACULTY

Professors GARDNER, EVERETT, and MEAD.

OFFICE HOURS

THE PRESIDENT. 10 Administration Building (*for students*, 11 Administration Building): 12 m. to 1 p.m.

THE DEAN OF THE UNIVERSITY. 7 Administration Building: 1.45 to 3 p.m., *except Saturdays*.

THE REGISTRAR, AND SECRETARY OF THE FACULTY. 1 Administration Building: 11 a.m. to 12 m.

THE REGISTRAR'S OFFICE. 4 Administration Building: 9 a.m. to 4 p.m.; Saturdays 9 a.m. to 1 p.m.

THE COMPTROLLER. 3 University Hall: 9 to 10 a.m. daily; 2 to 2.30 p.m., except Saturdays.

THE COMPTROLLER'S OFFICE. 9 a.m. to 4 p.m.; Saturdays 9 a.m. to 1 p.m.

THE DEAN OF THE GRADUATE DEPARTMENT. 5 Wilson Hall: 12.20 to 1.20 p.m., and 3.20 to 4.20 p.m.

THE LIBRARIAN OF THE UNIVERSITY. The John Hay Library: 9 to 10 a.m., 3 to 4 p.m.; Saturdays 9 to 10 a.m.

THE LIBRARIAN OF THE JOHN CARTER BROWN LIBRARY. The John Carter Brown Library: 9 a.m. to 5 p.m.; Saturdays 9 a.m. to 1 p.m.

THE DIRECTOR OF UNIVERSITY EXTENSION. The John Hay Library: 12.30 to 1.30 p.m.; 3.30 to 4.30 p.m.

THE SUPERINTENDENT OF GROUNDS AND BUILDINGS. 1 University Hall: 9 to 10 a.m. daily; 2 to 2.30 p.m., except Saturdays.

THE SUPERINTENDENT'S OFFICE. 8.30 a.m. to 6 p.m.

THE DEAN OF THE WOMEN'S COLLEGE. Pembroke Hall: Tuesdays and Thursdays, 10.15 to 11.15 a.m.; Mondays and Fridays, 11.15 a.m. to 12.15 p.m.

THE REGISTRAR OF THE WOMEN'S COLLEGE. Pembroke Hall: 9.15 a.m. to 1.30 p.m., 3 to 5 p.m.; Saturdays 9.15 a.m. to 1 p.m.

THE UNIVERSITY PHYSICIAN. R. G. BUGBEE, M.D. 223 Thayer Street: 2 to 4 p.m., 7 to 8 p.m. Sundays by appointment. Telephone Angell 2660-W.

THE ABSENCE COMMITTEE. H. B. HUNTINGTON, Secretary. 5 Administration Building: 1.45 to 3 p.m., except Wednesdays and Saturdays.

THE SUPERVISOR OF ATHLETIC ORGANIZATIONS. F. W. MARVEL. The Gymnasium: 9 to 11 a.m., 2 to 3 p.m.

THE SUPERVISOR OF NON-ATHLETIC ORGANIZATIONS. J. C. DUNNING, John Hay Library. 11.30 a.m. to 12 m., except Saturdays.

THE PUBLICITY COMMITTEE. 11 Administration Building: 11 a.m. to 12 m.

THE KEEPER OF GRADUATE RECORDS. John Hay Library.

THE EXECUTIVE SECRETARY. T. B. APPLEGET, 11 Administration Building: 11 a.m. to 12 m.

HISTORY OF BROWN UNIVERSITY

BROWN UNIVERSITY, first called Rhode Island College, was founded in 1764. The project originated among the leaders in the Philadelphia Baptist Association, who chose the colony of Rhode Island as the most suitable place, and in 1763 sent James Manning, a recent graduate of New Jersey College, to confer with the Baptists in Newport. Conditions in the colony were ripe for the establishment of an institution of learning on broad lines. The spirit of religious liberty still prevailed in the commonwealth founded by Roger Williams; commerce on land and sea was a growing source of wealth; and a considerable degree of culture existed, especially in Newport, then a thriving seaport and the home of many men of wide intellectual interests. Indeed, some of its leading citizens, including Ezra Stiles, later president of Yale College, had been considering plans for a college a year or two before Manning's visit, and the proposal of the Philadelphia Baptists won quick and hearty support. A charter, drawn up by Mr. Stiles and William Ellery (a signer of the Declaration of Independence), and amended by the Baptists, was granted by the legislature in 1764. It provided that twenty-two of the thirty-six trustees should be Baptists, five Quakers, four Congregationalists, and five Episcopalians; that eight of the twelve fellows should be Baptists, and the rest of any denominations; that the president should be a Baptist, but that the other members of the Faculty might be of any Protestant faith. Especially noteworthy are the following provisions: "Into this Liberal & Catholic Institution shall never be admitted any Religious Tests but on the Contrary all the Members hereof shall for ever enjoy full free Absolute and uninterrupted Liberty of Conscience"; and "the Sectarian differences of opinions, shall not make any Part of the Public and Classical Instruction."

The first meeting of the Corporation was held at Newport, in September, 1764, when Governor Stephen Hopkins, a Quaker, was chosen chancellor. A year later James Manning, who had become pastor of the Baptist church in Warren and had opened a Latin school, was appointed "President of the College, Professor of Languages and other Branches of Learning with full Power to act in those Capacities at Warren or elsewhere." The first student had been matriculated the day before; for nearly a year he was the only student. David

Howell, a graduate of New Jersey College, was engaged as tutor in 1766, and in 1769 was made professor of natural philosophy. At the first Commencement, in 1769, a class of seven graduated. In 1770 the College moved to Providence, a growing town of four thousand inhabitants, which had subscribed about \$15,000 for an endowment; some \$6000 had also been collected in Great Britain and among the Baptists of the Southern States. A site of eight acres on College Hill was bought for \$730; and University Hall, modelled on Nassau Hall at Princeton, and a house for the president were built in 1770-71. In 1775 the Baptist church, of which Manning had become pastor, erected a new meeting-house, "for the publick Worship of Almighty GOD; and also for holding Commencement in." From December, 1776, to May, 1782, the college building was used as barracks and hospital by American and French troops, and college exercises were suspended. Twenty-three of the sixty-seven graduates rendered active service on the patriot side during the Revolution. After the war the College began slowly to grow again. The students, who had numbered about forty in 1776, increased to seventy-two by 1789, and in 1790 a class of twenty-two graduated. Most of the instruction was given by the president and two or three tutors; but professorships without stipend were established in natural philosophy, natural history, mathematics and astronomy, and law. The library had two thousand volumes.

President Manning died in 1791. The success of the College during its first quarter-century was due largely to his ability as organizer, teacher, and orator. His discipline was paternal but strict. Students were visited daily in their rooms by the tutors, and most of them boarded in the college commons; all were required to attend chapel twice a day. The course of study, like the regimen, was based upon that at the College of New Jersey. The requirements for admission were a knowledge of Cicero, Virgil, the Greek Testament, and arithmetic, and ability to write "true Latin." In college the chief studies were Latin, Greek, mathematics, logic, philosophy, history, and oratory; most of these were not carried far, but the instruction in oratory was prolonged and thorough. Of the 165 graduates under Manning, 43 became ministers (26 Congregationalists, 12 Baptists), 29 lawyers, 19 physicians, and 48 entered public life.

Jonathan Maxcy, of the class of 1787, was the second president, and served until 1802, when he resigned to become president of Union College. He was a brilliant teacher and orator, but did not excel as

an administrator. There was little growth in the endowment under him, and no essential change in the course of study. The students increased to somewhat over one hundred. Of the 227 graduates, 66 became lawyers, 56 clergymen (34 Congregationalists, 11 Baptists), 36 teachers or professors, 17 judges, and 13 Congressmen. The most distinguished name is that of Henry Wheaton, of the class of 1802, minister to Prussia and authority on international law.

Asa Messer, of the class of 1790, who had been a member of the Faculty for eleven years, succeeded to the presidency. The name of the institution was changed to Brown University in 1804, in recognition of Nicholas Brown's gift of \$5000 to endow a chair of oratory and belles-lettres. A Medical School was established in 1811: local physicians gave short courses of lectures, which the candidates for a medical degree were required to attend for two years, besides studying three years with a reputable practitioner. The school lasted until 1828, and graduated eighty-seven men, several of whom attained eminence in their profession. By 1822 the students in the academic course had increased to one hundred and fifty-two; an additional dormitory was needed, and Hope College, named for Mr. Brown's sister, was therefore built by him in 1823. In 1825 the graduating class numbered forty-eight. Tuition, which had been \$12 under Manning and \$16 under Maxcy, was raised to \$20 in 1822; but the productive funds were only \$15,578 in 1824. The Faculty in 1825 consisted of the president, nine professors (four of whom were merely lecturers in the Medical School), and two tutors. The college library contained about five thousand volumes in 1826, when a catalogue was published; and the libraries of the Philermenian Society and the United Brothers, two student debating societies, comprised nearly three thousand more. The institution was still emphatically a poor man's college. The long vacation was placed in the winter, that students might teach school, and in the catalogue of 1825-26 is the statement, "Tuition, Library, Room Rent, and Board, less than \$100 per annum." The graduates in the regular course under President Messer numbered six hundred and ninety-three, nearly twice as many as under Manning and Maxcy. The most notable names among many distinguished in professional and public life are Horace Mann, who remodelled public-school education in America, Adoniram Judson, missionary to Burma, Samuel G. Howe, the teacher of Laura Bridgman, and William L. Marcy, Secretary of State.

President Messer's later years were disturbed by serious disorders

among the students and by opposition to his theological views, and he resigned in 1826. His successor was Francis Wayland, a graduate of Union College, where he taught for several years, and a prominent Baptist clergyman. His powerful personality soon raised the University to a higher level. He tightened the reins of government, and quickened the intellectual life. The Medical School was discontinued, in order that all the resources might be concentrated upon the academic course. Entrance requirements were somewhat raised. The curriculum was much enriched, especially in the classics, mathematics, and natural sciences, and political economy was added. In several departments lectures supplemented the text-book. Prizes for excellence in examinations and for essays were established. A fund of \$25,000 for the library was secured. The general endowment in 1841 was only \$32,300; but tuition, which was now \$36, brought in a considerable income. Manning Hall was built by Mr. Brown in 1835 as a chapel and library. Rhode Island Hall was erected in 1840 for the use of the departments of natural science, chiefly with funds subscribed by citizens of the state; and in the same year Mr. Brown built a new house for the president. At his death, in 1841, Mr. Brown left bequests which swelled his total gifts to the University to nearly \$160,000. A chapter of the Phi Beta Kappa Society was established in 1830, and the first Greek-letter fraternity for undergraduates in 1836. An Alumni Association was organized in 1842. *The Brunonian*, an undergraduate magazine, was published during 1829-31.

President Wayland's study of English universities, in 1840, had made him dissatisfied with American collegiate methods; the steady decline in numbers for several years (from 196 in 1836 to 152 in 1849) confirmed his belief that something was radically wrong; and in 1850 he launched his so-called New System, which had been in part anticipated at Harvard University and the University of Virginia. The plan comprised three main features: 1. An elective system, by which "every student might study what he chose, all that he chose, and nothing but what he chose"; 2. The development of courses in applied science, as an aid to agriculture and manufactures; 3. A new system of degrees, the degree of Master of Arts to be granted after four years of study, that of Bachelor of Arts after three years, and a new degree, Bachelor of Philosophy, to be given at the completion of a three-year course in scientific and English studies, with very low requirements for admission. A fund of \$125,000 was raised to put the New System into effect. The results were disap-

pointing. Only a narrow range of electives was possible, for the total number of courses was still small; the courses in applied science were limited to chemistry and civil engineering, and even for these there was not much demand; and the new system of degrees did not bring great increase in the number of students, while the quality was poorer. Yet the New System, in its best features, showed remarkable prevision of the direction that university education was soon to take.

President Wayland resigned in 1855, because of failing health. His successor was Barnas Sears, of the class of 1825, a very scholarly man, who had been president of Newton Theological Institution and secretary of the Massachusetts Board of Education. He restored the degrees of Master of Arts and Bachelor of Arts to their former footing, but retained the course for the degree of Bachelor of Philosophy and the courses in applied science. In spite of the Civil War the endowment increased from \$203,000 to \$327,000, and thirty-six scholarships of \$1000 each were founded; in 1863 the Chemical Laboratory was built. Tuition was raised to \$50 in 1864. Class Day was instituted in 1856; football, baseball, and boating developed; and at the outbreak of the Civil War a military company was formed. Of two hundred and seventy-eight men graduating during the war, one hundred and thirty-two enlisted in the army. Notable names among the graduates during this administration are those of two Secretaries of State, Richard Olney and John Hay. President Sears resigned in 1867, to become agent of the Peabody Fund for education in the South.

Alexis Caswell, of the class of 1822, who had resigned his professorship in 1864, was recalled as president in 1868, Professor George Ide Chace having served as president *ad interim* since the retirement of President Sears. During President Caswell's short term of office the productive funds were increased to \$602,000, and the chairs of physics and chemistry were endowed. In spite of an advance in tuition to \$75, the number of students somewhat increased, and the athletic and social side of undergraduate life received more and more emphasis. The Alumni Association was resuscitated in 1868, and local associations were formed in New York, Philadelphia, and Boston during the next two years. In 1870 the time of Commencement, which had always been in September except for two years under President Wayland, was changed to June.

President Caswell retired in 1872, and was succeeded by Ezekiel G. Robinson, of the class of 1838, president of Rochester Theologi-

cal Seminary. During his administration the University made great progress. Rhode Island Hall was enlarged in 1874, to accommodate the growing departments of natural science. The library, which had long outgrown its quarters in Manning Hall, was housed in a beautiful new building erected in 1878 with a bequest of John Carter Brown. Slater Hall, a dormitory, was built in 1879 by Horatio N. Slater. Sayles Hall, given by William F. Sayles in memory of his son, and containing class-rooms and a large auditorium, was completed in 1881. In 1883 University Hall was renovated. A physics laboratory, named Wilson Hall in honor of George F. Wilson, who left a bequest for it, was begun in 1889. Funds for the Lyman Gymnasium were given by Daniel W. Lyman in 1887, and for the Ladd Observatory by Herbert W. Ladd in 1889. The chair of natural history and botany was endowed by a bequest of Stephen T. Olney in 1878, and in 1884 the Metcalf Botanical Garden was given to the University by the widow of Whiting Metcalf. The productive funds were increased to \$1,000,000. The requirements for admission were made more severe; and the curriculum was much enlarged, especially in modern languages and natural science. In 1876 the course for the degree of Bachelor of Philosophy was lengthened to four years. The most radical change was a liberal though guarded extension of the elective system in 1885. Graduate study was thereby encouraged; the degree of Master of Arts was granted upon examination in 1888, that of Doctor of Philosophy in the following year. The number of undergraduates, however, remained nearly the same, seldom rising above two hundred and fifty.

Elisha Benjamin Andrews, of the class of 1870, who had been president of Denison University and professor in Newton Theological Institution, Brown University, and Cornell University, succeeded President Robinson in 1889. During his administration the University grew at a remarkable rate. The students increased to about nine hundred, of whom more than one hundred were candidates for advanced degrees. Several new departments were added, and the Faculty more than trebled. The courses in engineering received greater emphasis, and the degrees of Civil Engineer, Mechanical Engineer, and Bachelor of Science were established. In 1891 the Corporation voted to admit women to the college examinations; in 1892 women were recognized as candidates for degrees, and women graduate students were admitted to the University classes. In 1897 the Corporation created "a department of the University to be known as the Women's Col-

lege in Brown University"; and in the same year the Rhode Island Society for the Collegiate Education of Women built Pembroke Hall and gave it to the University as a recitation hall for the Women's College, where women undergraduates might receive instruction in separate classes taught by members of the University Faculty, although taking the University examinations and receiving their degrees from the University. Wilson Hall, Ladd Observatory, and Lyman Gymnasium were completed in 1891, and Hope College was renovated. Maxcy Hall, a dormitory with a few class-rooms, was built in 1895. A new athletic field, named in honor of President Andrews, was laid out in 1898-99. In 1898 the productive funds were \$1,125,685; the estimated value of the grounds and buildings was \$1,177,966. In this year President Andrews resigned, to become superintendent of the Chicago public schools.

William Herbert Perry Faunce, of the class of 1880, was elected president in 1899, Professor Benjamin F. Clarke having served as president *ad interim* for the preceding academic year. The material resources of the University have been greatly enlarged during the present administration. The general endowment has increased to \$4,446,243. Salaries have been raised, and a pension system similar to that of the Carnegie Foundation went into effect in 1913. Many new buildings have been erected: a house for the president, in 1901; an Administration Building, the gift of Augustus Van Wickle, in 1902; an Engineering Building, in 1903; Caswell Hall, a dormitory, in 1904; Rockefeller Hall, named for the donor, John D. Rockefeller, and occupied by the Christian Association and the Brown Union, in 1904; the John Carter Brown Library, given by the trustees of the estate of John Nicholas Brown, in 1904; the Carrie Tower, built by Paul Bajnotti in memory of his wife, Carrie Mathilde Brown Bajnotti, in 1904; a marble swimming pool, given by Colgate Hoyt in 1904; a field house on Andrews Field, erected by Edgar L. Marston, in 1907; and the John Hay Library, the gift of Andrew Carnegie and others, in 1910. The Arnold Biological Laboratory, named for the donor, Dr. Oliver H. Arnold, was completed in 1915. In 1903 a great organ, presented by Lucian Sharpe, was set up in Sayles Hall. Bronze statues of Caesar Augustus and Marcus Aurelius, the gifts of Moses B. I. Goddard, were placed on the campus in 1906 and 1908. An iron fence around the grounds was completed in 1905; and gates have been erected at various times—the Van Wickle Gates, in 1901; the John Nicholas Brown Gate, given by Mrs. Brown, in 1904; the God-

dard Gates, in memory of Chancellor William Goddard, the gift of his daughter, Mrs. C. Oliver Iselin, in 1910; and the gates at minor entrances, presented by the classes of 1872, 1884, and 1887. The Slater Memorial Homestead was given to the Women's College by Mrs. Horatio N. Slater, for a dormitory, in 1900. Sayles Gymnasium, for the women students, was built by Frank A. Sayles in 1906, in memory of his sister. Miller Hall, a women's dormitory named for Dr. and Mrs. Horace G. Miller, was erected in 1910.

The Faculty has increased to more than a hundred members, and the number of students to over eleven hundred. Entrance requirements for the engineering degrees and the degree of Bachelor of Philosophy have been raised, and those for the degree of Bachelor of Arts have been broadened. The curriculum has been widened and deepened, while the elective system has been guarded against abuse by regulations securing a certain breadth of study. Graduate study has been fostered by the development of laboratories and seminaries. The work of the Faculty has been better organized by the appointment of deans and by reorganization of the committee system. Undergraduate life is more carefully supervised, partly through agencies that give training in self-government. The University has been brought into closer relations with the community, the alumni, and other educational institutions, by the establishment of the Brown University Teachers' Association and the School of Education, the appointment of visiting committees, the formation of new alumni associations, and the giving of more power to the alumni in the choice of trustees.

The general effect of the policy of the last three administrations has been to make the institution a "university college," as it has been called, combining many of the advantages of the small college and the large university.

At the close of the one hundred and fifty-first Commencement of the University, in 1919, there were enrolled the names of 8681 graduates—7705 men and 976 women. Of this number, 7670 had received the academic first degree; 236, exclusive of the foregoing, had received advanced degrees; 69, not previously reckoned, had received the degree of Doctor of Medicine; 716 others had received honorary degrees. Of the entire number, 5222, or 60 per cent., were living.

ADMISSION TO THE UNIVERSITY

METHODS OF ADMISSION TO THE FRESHMAN CLASS

ENTRANCE EXAMINATIONS CONDUCTED BY THE UNIVERSITY. Examinations for admission to the Freshman class are given by the University in September and at mid-year. Candidates desiring to be examined in June must take the examinations conducted by the College Entrance Examination Board; see pages 32, 33. A candidate may, at his option, take all his examinations in June or in September, or he may take part in June and part in September.

Before taking any examination conducted by the University, a candidate must make written application to the Registrar, on a blank provided for the purpose, and secure a card admitting him to the examination. This may be done by correspondence, provided that the application is received not less than one week before the date of the first examination. A letter of recommendation from the principal of the preparatory school must be filed with the application.

Any of the September examinations may be taken one year before the candidate expects to enter college.

No credit beyond admission is given for certificates from preparatory schools or the New York Board of Regents, or for entrance examinations conducted by the College Entrance Examination Board or the University.

If a candidate offers subjects in excess of those required for admission and desires to obtain credit for them as college subjects, he may apply to the Committee on Registration and Attendance for information regarding special examinations for advanced standing. Such examinations are not given in all preparatory subjects.

Examinations for advanced standing should be taken during the regular examination period in September. No student will be allowed to take such examinations after the beginning of the second year.

The mid-year examinations will be held in Rhode Island Hall, Room 1; the September examinations will be held in Sayles Hall.

The order of the examinations in 1920 will be as follows:

JANUARY 27, 1920, and SEPTEMBER 14, 1920

Elementary Algebra 1, 8 a.m. to 10 a.m.; *Elementary Algebra 2*, 8 a.m. to 10 a.m.; *Plane Geometry*, 10 a.m. to 12 m.; *Two-year Latin*, 1 p.m. to 3 p.m.; *Elementary Latin*, 1 p.m. to 3 p.m.; *Advanced Latin*, 3.30 p.m. to 5 p.m.

JANUARY 28, 1920, and SEPTEMBER 15, 1920

English 1, 8 a.m. to 10 a.m.; *English 2*, 10 a.m. to 12 m.; *Chemistry*, 1 p.m. to 3 p.m.; *Ancient History*, 3.30 p.m. to 5.30 p.m.

JANUARY 29, 1920, and SEPTEMBER 16, 1920

Elementary German (First year), 8 a.m. to 10 a.m.; *Elementary German (Second year)*, 10 a.m. to 12 m.; *Intermediate German*, 1 p.m. to 3 p.m.; *American History*, 3.15 p.m. to 5.15 p.m.; *Physiography*, 5.30 p.m. to 7.30 p.m.

JANUARY 30, 1920, and SEPTEMBER 17, 1920

Elementary French (First year), 8 a.m. to 10 a.m.; *Elementary French (Second year)*, 10 a.m. to 12 m.; *Intermediate French*, 1 p.m. to 3 p.m.; *Astronomy*, 3.15 p.m. to 5.15 p.m.; *Elementary Italian (First year)*, 3.15 p.m. to 5.15 p.m.; *English History*, 5.30 p.m. to 7.30 p.m.

JANUARY 31, 1920, and SEPTEMBER 18, 1920

Plane Trigonometry, 8 a.m. to 10 a.m.; *Solid Geometry*, 10 a.m. to 12 m.; *Advanced Algebra*, 1 p.m. to 3 p.m.; *Elementary Italian (Second year)*, 3.15 p.m. to 5.15 p.m.; *Physics*, 3.15 p.m. to 5.15 p.m.; *Botany*, 5.30 p.m. to 7.30 p.m.; *Intermediate Italian*, 5.30 p.m. to 7.30 p.m.

FEBRUARY 1, 1920, and SEPTEMBER 20, 1920

Elementary Greek, 8 a.m. to 10 a.m.; *Elementary Spanish (First year)*, 8 a.m. to 10 a.m.; *Advanced Greek*, 10 a.m. to 11.30 a.m.; *Elementary Spanish (Second year)*, 10 a.m. to 12 m.; *Medieval and Modern History*, 1 p.m. to 3 p.m.; *Intermediate Spanish*, 3.30 p.m. to 5.30 p.m.

ENTRANCE EXAMINATIONS CONDUCTED BY THE COLLEGE ENTRANCE EXAMINATION BOARD. Examinations conducted by the College Entrance Examination Board are accepted in place of the corresponding examinations conducted by Brown University, provided they are passed with a grade of at least 60 per cent. In 1920 these examinations will be held June 21-26.

In June, 1920, there will be separate blank forms for the "application for examination" and "certificate of recommendation." The former should be sent to the College Entrance Examination Board, 431 West 117th Street, New York, N. Y., the latter to the Registrar of the University. Both forms may be obtained from the Secretary of the Board upon request by mail. Applications for examination at points in the United States east of the Mississippi River, or on the Mississippi River, must be received by the Secretary on or before May 31, 1920; applications for examination elsewhere in the United States or in Canada must be received on or before May 24, 1920; and applications for examinations at points outside the United States or Canada must be received on or before May 10, 1920. When the candidate has failed to obtain the required blank form of application for examination, the usual examination fee will be accepted if the fee arrive not later than the specified date accompanied by a memorandum containing the name and address of the candidate, the examination centre at which he wishes to present himself, and a list of all the subjects in which he desires to take the examinations.

The examination fee is \$6 for candidates examined in the United States and Canada, and \$20 for candidates examined outside of the United States and Canada. The fee, which must be sent with the application, should be remitted by postal order, express order, or draft on New York, to the order of the College Entrance Examination Board.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon the payment of \$6 in addition to the regular fee.

A list of the places at which examinations are to be held by the Board in June, 1920, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

ADMISSION BY CERTIFICATE. In place of examinations, certificates are accepted from any school which has the privilege of issuing certificates to Brown University. Certificates are accepted for admission to the Freshman class only, not for admission to advanced standing.

Principals of schools in New England who desire the certificate privilege for Brown University, or for any other college which is a member of the New England College Entrance Certificate Board, should address the Secretary of the Board, Dean Frank W. Nicolson, Wesleyan University, Middletown, Conn., who will furnish the necessary application blanks. These blanks must be returned to him before April 1 of the year for which the certificate privilege is desired.

Principals of schools situated outside of New England who desire the certificate privilege must make application to the Registrar of the University before May 1, if possible, and must furnish full and detailed information regarding the courses of study, teachers, pupils, library, laboratories, apparatus, etc. Blank forms for this purpose will be supplied on request. If this statement is satisfactory, the school will be placed on the accredited list for a period of from one to three years. At the expiration of this period, or whenever the principal of the school is changed or a change in policy is instituted, a new application for the certificate privilege must be made.

Certificates from the New York Board of Regents are accepted for the specified subjects so far as they coincide with the entrance requirements of Brown University.

Blank forms for the certification of candidates may be obtained from the Registrar by the principals of schools having the privilege of certification. These forms should be filled out and returned to him by July 1 for students intending to enter in September, or before January 15 for students intending to enter at mid-year. When a student has attended more than one school, a letter of recommendation from the principal of the school last attended must accompany the certificate.

ADMISSION AT MID-YEAR

On account of the increasing number of applications from the mid-winter graduates of high schools and academies, arrangements have been made whereby applicants for admission to the courses leading to the degrees of Bachelor of Arts and Bachelor of Philosophy will be admitted at the beginning of the second semester. Candidates for the degree of Bachelor of Science are admitted only in September. For detailed statements regarding requirements for admission, entrance examinations, registration and enrolment, and payment of bills, see pages 31-33, 52, 53, 169-171. Such necessary readjustments have been made in the present curriculum as will enable students to arrange a satisfactory schedule of subjects.

ENTRANCE REQUIREMENTS

ENTRANCE UNITS. A unit in any subject represents a year's study, constituting approximately a quarter of a full year's work in a secondary school.

This statement is designed to afford a standard of measurement for the work done in secondary schools. It takes the four-year high school course as a basis, and assumes that the length of the school year is from thirty-six to forty weeks, that a period is from forty to sixty minutes in length, and that the study is pursued for four or five periods a week; but under ordinary circumstances, a satisfactory year's work in any subject cannot be accomplished in less than one hundred and twenty sixty-minute periods or their equivalent. Schools organized on any other than a four-year basis can, nevertheless, estimate their work in terms of this unit.

SUBJECTS REGULARLY ACCEPTED FOR ADMISSION

	<i>Units</i>		<i>Units</i>
English 1 (Grammar and Composition)	1½	Intermediate German	1
English 2 (Literature)	1½	Elementary Spanish (First year)	1
Ancient History	1	Elementary Spanish (Second year)	1
Medieval and Modern European History	1	Intermediate Spanish	1
English History	1	Elementary Italian (First year)	1
American History and Civil Government	1	Elementary Italian (Second year)	1
Two-year Latin	2	Intermediate Italian	1
Elementary Latin	3	Elementary Algebra 1	1
Advanced Latin	1	Elementary Algebra 2	½
Elementary Greek	2	Advanced Algebra	½
Advanced Greek	1	Plane Geometry	1
Elementary French (First year)	1	Solid Geometry	½
Elementary French (Second year)	1	Plane Trigonometry	½
Intermediate French	1	Physics	1
Elementary German (First year)	1	Chemistry	1
Elementary German (Second year)	1	Botany	1
		Physiography	1
		Astronomy (for Sc.B. only)	1

UNLISTED SUBJECTS. With the approval of the Committee on Registration and Attendance, subjects not on the regular list, but included in the curriculum of an approved school, may be presented by certificate; provided: (1) that the candidate is a graduate of the school on a four-year course; (2) that the grade for certification is the same as for the listed subjects.

ENTRANCE REQUIREMENTS FOR THE VARIOUS DEGREES†

For Students who entered in 1919 or thereafter

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS. Candidates must present fourteen and one-half units as follows: three in English; one and one-half in Algebra; one in Plane Geometry; one in History; the elementary and advanced requirement in either Latin or Greek; and elective units totalling four if Latin is presented, or five if Greek is presented.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY. Candidates must present fourteen and one-half units as follows: three in English; one and one-half in Algebra; one in Plane Geometry; one in History; three in languages other than English, and five in elective subjects.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE.§ Candidates must present fourteen units as follows: three in English; one and one-half in Algebra; one in Plane Geometry; one-half in Solid Geometry; one in History; four from the following subjects: Chemistry, Physics, Languages other than English; and three in elective subjects.

ENTRANCE REQUIREMENTS IN THE SEVERAL SUBJECTS||

ENGLISH. *Three units.* Preparation in English has two main objects, of equal importance: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

GRAMMAR AND COMPOSITION. The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in all written work during the whole course. The principles

† In addition to these requirements all students entering college will be required to take a comprehensive psychological test.

§ The degree of Bachelor of Science is given only for engineering courses. The work is mainly technical, but offers some freedom of election.

|| The following statements are condensations of those in the Report of the College Entrance Examination Board. Teachers are advised to consult this report.

governing punctuation, diction, sentences, paragraphs, and the whole composition should be carefully studied; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter-writing, narration, description, and easy exposition and argument based upon simple outlines. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Special instruction in language and composition should be accompanied by concerted effort of teachers, whatever subjects they teach, to cultivate in the student the habit of using good English in all recitations and exercises, whether oral or written.

LITERATURE. The second object requires intelligent reading in considerable amount. The student should be trained in reading aloud, and should be encouraged to commit to memory some of the more notable passages both in verse and in prose. He should learn the most important facts in the lives of the authors whose works he reads, and know their place in literary history. He should read carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and the charm of what he reads.

FOR STUDENTS ENTERING IN 1920, 1921, OR 1922

Candidates will have the option of taking either of two examinations: (1) a "Comprehensive" examination; (2) a "Restricted" examination, based in part on a prescribed list of books. Each examination will be divided into two parts, one of which (English 1) will be on grammar and composition, and the other (English 2) on literature.

GRAMMAR AND COMPOSITION. In both the Comprehensive and the Restricted examination in Grammar and Composition the candidate may be asked to construe sentences, to parse words, and to correct mistakes in usage. The main test in composition will consist of one or more essays, developing a theme through several paragraphs; the subjects will be drawn from the books listed below under *Reading*, from the candidate's other studies, and from his personal knowledge and experience quite apart from reading. Several subjects for essays, perhaps eight or ten, will be given, from which the candidate may make his own selections.

LITERATURE. *Comprehensive Examination.* This examination is intended to test the candidate's ability to understand and appreciate good literature. Selections in prose and verse which the candidate presumably has not read will be set before him, and questions will be asked about their content and form. The candidate will be expected to explain the meaning of passages of some difficulty; to distinguish between different styles and verse forms; and to show a knowledge of the simpler principles of structure in novels and plays. It will therefore be necessary for him to have read with care a considerable amount

of literature of the kind indicated in the lists of books for *Reading* given below.

LITERATURE. *Restricted Examination.* The examination in literature will include: (1) General questions designed to test such a knowledge and appreciation of literature as may be gained by fulfilling the requirements defined under *Reading* below. *The candidate will be required to present to the examiner a list of the books read in preparation for the examination, certified by the principal of the school in which he was prepared;* but this list will not be made the basis of detailed questions. (2) More particular questions upon the content, form, and structure of the books prescribed below for *Study*, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, grammar, or other essentials of good usage.

Reading

At least two selections are to be made from each of the following groups, except as otherwise provided under Group I.

GROUP I. CLASSICS IN TRANSLATION. The *Old Testament*, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the *Odyssey*, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the *Aeneid*. The *Odyssey* and the *Aeneid* should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

GROUP II. DRAMA. Shakspeare: *The Merchant of Venice*, *As You Like It*, *Julius Caesar*.

[For reading in preparation for the Comprehensive Examination the following plays are also suggested: *Everyman*; Goldsmith: *She Stoops to Conquer*; Sheridan: *The Rivals*.]

GROUP III. PROSE FICTION. Dickens: *A Tale of Two Cities*; George Eliot: *Silas Marner*; Scott: *Quentin Durward*; Hawthorne: *The House of the Seven Gables*.

[For reading in preparation for the Comprehensive Examination, the following books are also suggested: Reade: *Griffith Gaunt*; Lytton: *The Last Days of Pompeii*; Stevenson: *Dr. Jekyll and Mr. Hyde*; Kipling: *Kim*, *Captains Courageous*, *The Jungle Books*; Howells: *The Rise of Silas Lapham*, *A Boy's Town*; Wister: *The Virginian*; Cable: *Old Creole Days*; Short Stories by Bret Harte, Aldrich, Page, Hale, Barrie, and other good writers.]

GROUP IV. ESSAYS, BIOGRAPHY, ETC. Addison and Steele: *The Sir Roger de Coverley Papers*; Irving: *The Sketch Book* (selections, about 175 pages); Parkman: *The Oregon Trail*.

[For reading in preparation for the Comprehensive Examination, the following works are also suggested: Washington: *Farewell Address*; Burke: *Speech on Conciliation with America*; Macaulay: *Essay on the Life of Johnson*; *Speech on Copyright, Chapter III of the History of England*; Carlyle: *Essay on Burns*; Webster: *First Bunker Hill Oration*; Emerson: *Manners, Self-Reliance*; Burroughs: *Selected Essays*; Warner: *In the Wilderness*; Curtis: *Prue and I, The Public Duty of Educated Men*; Hudson: *Idle Days in Patagonia*; Clemens: *Life on the Mississippi*; Riis: *The Making of an American*; Bryce: *The Hindrances to Good Citizenship*.]

GROUP V. POETRY. Selections from Tennyson and Browning; Scott: *The Lady of the Lake*; Coleridge: *The Ancient Mariner*; Arnold: *Sohrab and Rustum*.

[For reading in preparation for the Comprehensive Examination, the following works are also suggested: Milton: *L'Allegro, Il Penseroso, Comus, Lycidas*; Tennyson: *The Coming of Arthur, The Holy Grail*; Arnold: *Balder Dead*.]

The suggestions above are not intended to be in any sense prescriptive: they indicate by examples the kind of literature that pupils should be taught to appreciate.

Study

One selection to be made from each of the following groups:

GROUP I. DRAMA. Shakspeare: *Macbeth, Hamlet*.

GROUP II. POETRY. Milton: *L'Allegro, Il Penseroso, Comus*; Palgrave: *Golden Treasury* (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley.

GROUP III. ORATORY. Burke: *Speech on Conciliation with America*; Washington: *Farewell Address*; Webster: *First Bunker Hill Oration*; Lincoln: *Gettysburg Address*.

GROUP IV. ESSAYS. Macaulay: *Life of Johnson*; Carlyle: *Essay on Burns*, with a brief selection from Burns's Poems.

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, grammar, or other essentials of good usage.

These requirements are the same as those of the College Entrance Examination Board in English.

MATHEMATICS. ELEMENTARY ALGEBRA 1. *One unit*. The requirement includes the following subjects: the four fundamental operations for rational al-

gebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative. 2. *One-half unit.* The requirement includes quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; the binomial theorem for positive integral exponents; the formulae for the n th term, and the sum of the terms, of arithmetical and geometric progressions, with applications.

To fulfil the entrance requirement in Elementary Algebra both 1 and 2 must be presented. It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *a* (i and ii).

PLANE GEOMETRY. *One unit.* The requirement in Plane Geometry covers the usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle; the solution of numerous original exercises, including loci problems; applications to the mensuration of lines and plane surfaces.

Teachers of Geometry should lay stress on accuracy of statement and elegance of form as well as on clear and strict reasoning. Mere memorizing should be avoided. Special care should be taken that in the proof of a proposition no lines be drawn unless their construction is proved to be possible.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *c*.

SOLID GEOMETRY. *One-half unit.* The requirement in Solid Geometry covers the usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurements of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *d*.

PLANE TRIGONOMETRY. *One-half unit.* The requirement in Plane Trigonometry includes definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulae, in particular for the sine, cosine, and tangent of the sum and difference of two angles, of

the double angle and half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulae; the solution of trigonometric equations of a simple character; the theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles; practical applications.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *f*.

ADVANCED ALGEBRA. *One-half unit.* The requirement in Advanced Algebra includes permutations and combinations, limited to simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations; numerical equations of higher degree, and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *b*.

LATIN. ‡ **ELEMENTARY LATIN.** *Three units.* The reading without the prescription of particular authors and works shall not be less in amount than Caesar, *Gallic War*, Books I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias. The reading shall be selected from the following authors and works: Caesar, *Gallic War* and *Civil War*, and Nepos, *Lives*; Cicero, orations, letters, and *De Senectute*, and Sallust, *Catiline* and *Jugurthine War*.

Candidates will be examined in translation at sight of passages from Caesar and Cicero. The vocabulary, constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above. They will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

This requirement is the same as that of the College Entrance Examination Board in Latin 1, 2, 4.

‡ For students presenting by examination the full four-unit requirement in Latin, the examinations of the College Entrance Examination Board in Latin 1, 2, 4, 5 will be accepted.

ADVANCED LATIN. *One unit.* The reading shall not be less in amount than Virgil, *Aeneid*, Books I-VI. This reading shall be selected from Virgil, *Bucolics*, *Georgics*, and *Aeneid*, and Ovid, *Metamorphoses*, *Fasti*, and *Tristia*.

Candidates will be examined in translation at sight of passages from Virgil and Ovid. They will be examined also upon the following prescribed reading: Virgil, *Aeneid*, Books I, II, and either IV or VI, at the option of the candidate. The examination will include questions on subject-matter and meter.

This requirement is the same as that of the College Entrance Examination Board in Latin 5, 6.

TWO-YEAR LATIN. *Two units.* The reading should not be less in amount than Caesar, *Gallie War*, Books I-IV, and should be selected by the schools from Caesar, *Gallie War* and *Civil War*, and Nepos, *Lives*. Candidates will be examined in translation at sight of passages from the above authors, and in grammar and composition.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

This requirement is practically the same as that of the College Entrance Examination Board in Latin 3.

GREEK. ELEMENTARY GREEK. *Two units.* The requirement in Elementary Greek includes: (1) Xenophon's *Anabasis*, Books I-IV, with attention not only to language, but to subject-matter as well; (2) grammar, including a familiar knowledge of inflection, word-formation, and ordinary syntax. This will be tested by: (a) questions on a passage from the *Anabasis*; (b) translation into Greek, with accents, of simple English sentences.

This requirement is the same as that of the College Entrance Examination Board in Greek a (i and ii), b, and g.

ADVANCED GREEK. *One unit.* The requirement in advanced Greek includes: (1) Three books of Homer's *Iliad* or *Odyssey*, with questions on meter, Homeric dialect, etc., or (upon request four weeks in advance of the examination) an equivalent amount of a prose author; (2) translation at sight of simple Attic prose or Homer; (3) translation into Greek, with accents, of a continuous passage of English narrative, based upon material similar to the *Anabasis*.

This requirement is the same as that of the College Entrance Examination Board in Greek f and ch.

FRENCH. ELEMENTARY FRENCH. FIRST YEAR. *One unit.* At the end of the first year the pupil should be able to pronounce French accurately, to translate at sight very easy French prose, to put into French very simple English sen-

tences taken from the language of every-day life or based upon the portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

During the first year the work should comprise : Careful drill in pronunciation ; the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural nouns, the inflection of adjectives, participles, and pronouns ; the use of personal pronouns, common adverbs, prepositions, and conjunctions ; the order of words in the sentence, and the elementary rules of syntax, including the simpler uses of the conditional and subjunctive ; abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression ; the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read ; writing French from dictation.

As no examination in first-year French is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University ; see pages 31, 32.

ELEMENTARY FRENCH. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read and translate at sight easy French prose, to put into French simple English sentences taken from the language of every-day life or based upon the portion of the French text read, to write from dictation simple French sentences, and to answer questions on the rudiments of the grammar, as defined in the requirement for the first year, with the additions made below.

During the second year the work should comprise : The reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches ; constant practice, as in the previous year, in translating into French easy variations upon the texts read ; frequent abstracts, sometimes oral and sometimes written, of portions of the text already read ; writing French from dictation ; continued drill upon the rudiments of grammar, with constant application in the construction of sentences ; mastery of the forms and use of pronouns, pronominal adjectives, and of all but the rare irregular verb forms.

Suitable texts for the second year are : About's *Le roi des montagnes* ; Bruno's *Le tour de la France* ; Daudet's easier short tales ; La Bédollière's *La Mère Michel et son chat* ; Erckmann-Chatrian's stories ; Foa's *Contes biographiques* and *Le petit Robinson de Paris* ; Foncin's *Le pays de France* ; Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon* ; Legouvé and Labiche's *La cigale chez les fourmis* ; Malot's *Sans famille* ; Mairêt's *La tâche du petit Pierre* ; Mérimée's *Colomba* ; extracts from Michelet ; Sarcey's *Le siège de Paris* ; Verne's stories.

The combined requirement in first and second year Elementary French is the same as that of the College Entrance Examination Board in French *a*.

INTERMEDIATE FRENCH. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts for the third year are: About's stories; Augier and Sandeau's *Le gendre de M. Poirier*; Béranger's poems; Corneille's *Le Cid* and *Horace*; Coppée's poems; Daudet's *La Belle-Nivernaise*; La Brète's *Mon oncle et mon curé*; Madame de Sévigné's letters; Hugo's *Hernani* and *La chute*; Labiche's plays; Loti's *Pêcheur d'Islande*; Mignet's historical writings; Molière's *L'avare* and *Le bourgeois gentilhomme*; Racine's *Athalie*, *Andromaque*, and *Esther*; George Sand's plays and stories; Sandeau's *Mademoiselle de la Seiglière*; Scribe's plays; Thierry's *Récits des temps mérovingiens*; Thiers's *L'expédition de Bonaparte en Egypte*; de Vigny's *La canne de jonc*; Voltaire's historical writings.

This requirement is the same as that of the College Entrance Examination Board in French *b*.

GERMAN.‡ **ELEMENTARY GERMAN. FIRST YEAR.** *One unit.* At the end of the first year the pupil should be able to read at sight, and to translate, a passage of very easy dialogue or narrative prose, help being given upon unusual words and constructions, to put into German simple English sentences taken from the language of every-day life or based upon the text given for translation, and to answer questions upon the rudiments of the grammar, as defined below.

During the first year the work should comprise: Careful drill upon pronunciation; the memorizing and frequent repetition of easy colloquial sentences; drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; the reading of from 75 to 100 pages of graduated texts from a

‡ An oral test forms a part of all entrance examinations in German.

reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

As no examination in first year German is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University; see pages 31, 32.

ELEMENTARY GERMAN. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read at sight, and to translate, a passage of easy dialogue or narrative prose, help being given on unusual words and constructions, to put into German short English sentences taken from the language of every-day life or based upon the text given for translation, to write from dictation simple German sentences, and to answer questions upon the rudiments of grammar, as defined in the requirement for the first year, with the additions made below.

During the second year the work should comprise: The reading of from 150 to 200 pages of literature in the form of easy stories and plays; accompanying practice in the translation into German of easy variations upon the matter read and also in the offhand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; writing German from dictation; continued drill upon the rudiments of the grammar and mastery of the adjective declensions, the passive, and word-order, in order that the pupil may use his knowledge with facility in the formation of sentences and state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder*; Arnold's *Fritz auf Ferien*; Baumbach's *Die Nonna* and *Der Schwiegersohn*; Gerstäcker's *Germelshausen*; Heyse's *L'Arrabbiata*, *Das Mädchen von Treppi*, and *Anfang und Ende*; Hillern's *Höher als die Kirche*; Jensen's *Die braune Erica*; Leander's *Träumereien* and *Kleine Geschichten*; Seidel's *Märchen*; Stökl's *Unter dem Christbaum*; Storm's *Immensee* and *Geschichten aus der Tonne*; Zschokke's *Der zerbrochene Krug*.

Among shorter plays the best available are perhaps Benedix's *Der Prozess*, *Der Weiberfeind*, and *Günstige Vorzeichen*; Elz's *Er ist nicht eifersüchtig*; Wichert's *An der Majorsecke*; Wilhelmi's *Einer muss heiraten*. It is recommended, however, that not more than one of these plays be read. The narrative style should predominate. A good selection of reading matter for the second year would be Andersen's *Märchen*, or *Bilderbuch*, or Leander's *Träumereien*, to the extent of about forty pages. After that, such a story as *Das kalte Herz* or *Der zerbrochene Krug*; then *Höher als die Kirche* or *Immensee*; next a good story by Heyse, Baumbach, or Seidel; lastly *Der Prozess*.

The combined requirement in first and second year elementary German is the same as that of the College Entrance Examination Board in German a.

INTERMEDIATE GERMAN. *One unit.* At the end of the intermediate course the pupil should be able to read at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation, and to translate and explain a passage of classical literature taken from some text previously studied.

The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; writing connected German passages from dictation; also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference to the infinitive and subjunctive), and likewise upon word-order and word-formation.

Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach's *Die Freiherren von Gemperlein*; Freytag's *Die Journalisten* and *Bilder aus der deutschen Vergangenheit*, — for example, *Karl der Grosse*, *Aus den Kreuzzügen*, *Doktor Luther*, *Aus dem Staat Friedrichs des Grossen*; Fouqué's *Undine*; Gerstäcker's *Irrfahrten*; Goethe's *Hermann und Dorothea* and *Iphigenie*; Heine's poems and *Reisebilder*; Hoffmann's *Historische Erzählungen*; Lessing's *Minna von Barnhelm*; Meyer's *Gustav Adolf's Page*; Moser's *Der Bibliothekar*; Riehl's *Novellen*, — for example, *Burg Neideck*, *Der Fluch der Schönheit*, *Der stumme Ratsherr*, *Das Spielmannskind*; Rosegger's *Waldheimat*; Schiller's *Der Neffe als Onkel*, *Der Geisterseher*, *Wilhelm Tell*, *Die Jungfrau von Orleans*, *Das Lied von der Glocke*, *Balladen*; Scheffel's *Der Trompeter von Säckingen*; Wildenbruch's *Das edle Blut*; a good anthology of German verse (such as Hatfield's or von Klenze's).

This requirement is the same as that of the College Entrance Examination Board in German b.

SPANISH. ELEMENTARY SPANISH. FIRST YEAR. *One unit.* At the end of the elementary course the pupil should be able to pronounce Spanish accurately, to read at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of every-day life or based upon a portion of the Spanish text read, and to answer questions on the rudiments of the grammar, as defined below.

During the first year the work should comprise: Careful drill in pronunciation; the rudiments of grammar, including the conjugation of the more regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the use of natural forms of expression; the reading and accurate rendering into good English of from 100 to 150 duodecimo

pages of graduated texts, with translation into Spanish of easy variations of the sentences read; writing Spanish from dictation.

As no examination in first-year Spanish is given by the College Entrance Examination Board, this examination must be taken in September at Brown University; see pages 31, 32.

ELEMENTARY SPANISH. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read and translate at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of everyday life, or based upon a portion of the text read, to write from dictation simple Spanish sentences, and to answer questions on the rudiments of the grammar, as defined in the requirement for the first year, with the additions made below.

During the second year the work should comprise: The reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; constant practice, as in the previous year, in translating into Spanish easy variations upon the texts read; frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; writing Spanish from dictation; continued drill upon the rudiments of grammar, with constant application in the construction of sentences; mastery of the forms and use of pronouns, pronominal adjectives, and of all but the rare irregular verb forms.

Suitable texts for the second year are: Valera's *El Pájaro verde*; Alarcón's *Novelas Cortas*; Valdés's *José* and *La Hermana San Sulpicio*; selections from the works of Mesonero Romanos; Galdós's *Marianela*; Quintana's *La Vida de Nuñez de Balboa*; Padre Isla's version of *Gil Blas*; Carrión and Aza's *Zaraquëta*.

The combined requirement in first and second year Elementary Spanish is the same as that of the College Entrance Examination Board in Spanish.

INTERMEDIATE SPANISH. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary Spanish prose or simple poetry, to translate into Spanish a connected passage of English based upon the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of Spanish of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving Spanish paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts for the third year are Becquer's *Tales, Legends, and Poetry*; Valera's *Pepita Jiménez*; Ibanez's *La Barraca*; Galdós's *Doña Perfecta*; Echegaray's *El Gran Galeoto*; Ayala's *Consuelo*; Gil y Zárate's *Guzmán el Bueno*; Pereda's *Pedro Sánchez*; Hills and Morley's *Modern Spanish Lyrics*; Ford's *Selections from Don Quijote*.

As no examination in intermediate Spanish is given by the College Entrance

Examination Board, this examination must be taken in September at Brown University; see pages 31, 32.

ITALIAN. ELEMENTARY ITALIAN. FIRST YEAR. *One unit.* At the end of the first year the pupil should be able to pronounce Italian accurately, to translate at sight very easy Italian prose, to put into Italian very simple English sentences taken from the language of every-day life or based upon a portion of the Italian text read, and to answer questions on the rudiments of grammar as defined below.

During the first year the work should comprise: Careful drill in pronunciation, the rudiments of grammar, including the conjugation of the regular verbs and the more common irregular verbs (including those that suffer orthographical and radical changes); the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax, including the simpler uses of the subjunctive; abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; the reading and accurate translation into good English of from 100 to 150 duodecimo pages of graduated texts, with translation into Italian of easy variations of the sentences read; writing Italian from dictation.

ELEMENTARY ITALIAN. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read and translate at sight easy Italian prose, to put into Italian simple English sentences taken from the language of every-day life, or based upon a portion of the Italian text read, to write from dictation simple Italian sentences, and to answer questions on the grammar.

During the second year the work should comprise: The reading of from 250 to 400 pages of easy prose or poetry; constant practice in translating into Italian easy variations upon the text read; frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; writing Italian from dictation; continued drill upon the grammar, with constant application in the construction of sentences.

Suitable texts for the second year are: Manzoni's *I Promessi Sposi*, Levi; *Selections from Carducci*, Marinoni.

INTERMEDIATE ITALIAN. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary Italian prose or poetry, to translate into Italian a connected passage of English based upon the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of Italian, including a considerable amount of Dante's *Divina Commedia*; constant practice in giving Italian paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

As no examinations in Italian are given by the College Entrance Examination Board, the examinations in this subject must be taken in September at Brown University; see pages 31, 32.

HISTORY. ANCIENT HISTORY. *One unit.* Special attention to Greek and Roman history, but including also a short introductory study of the more ancient nations and the chief events of the early Middle Ages, down to the death of Charlemagne.

MEDIEVAL AND MODERN EUROPEAN HISTORY. *One unit.* From the death of Charlemagne to the present time.

ENGLISH HISTORY. *One unit.*

AMERICAN HISTORY AND CIVIL GOVERNMENT. *One unit.*

The examinations in history will be so framed as to require comparison and judgment on the pupil's part rather than mere memory. The examinations will presuppose the use of good text-books, at least 600 duodecimo pages of collateral reading, and practice in written work. Historical novels, plays, or poems will not be accepted in fulfilment of the requirement of collateral reading. The methods of instruction which the examinations in History and Civil Government presuppose are substantially identical with those set forth in *A History Syllabus for Secondary Schools* (D. C. Heath & Co.); and the references for collateral reading given in that manual may be taken as indications of the kind of collateral reading that should be done.

These requirements are the same as those of the College Entrance Examination Board in History *a, b, c, d.*

PHYSICS. *One unit.* Preparation in Physics should include: (1) The study of one standard text-book, for the purpose of obtaining a connected and comprehensive view of the subject. The student should be given opportunity and encouragement to consult other scientific literature. (2) Instruction by lecture-table demonstrations, to be used mainly for illustration of the facts and phenomena of physics in their qualitative aspects and in their practical applications. (3) Individual laboratory work, consisting of experiments requiring at least the time of thirty double periods. The experiments performed by each student should number at least thirty. The work should be so distributed as to give a wide range of observation and practice. The aim of laboratory work should be to supplement the pupil's fund of concrete knowledge and to cultivate his power of accurate observation and clearness of thought and expression. The exercises should be chosen with a view to furnishing forceful illustrations of fundamental principles and their practical applications. They should be such as yield results capable of ready interpretation, obviously in conformity with theory, and free from the disguise of unintelligible units. Slovenly work should not be tolerated, and the effort for precision should not lead to

the use of apparatus or processes so complicated as to obscure the principle involved.

Throughout the whole course special attention should be paid to the common illustrations of physical laws and to their industrial applications.

In the solution of numerical problems, the student should be encouraged to make use of the simple principles of algebra and geometry to reduce the difficulties of solution, but unnecessary mathematical difficulties should be avoided, and care should be exercised to prevent the student from losing sight of the concrete facts in the manipulation of symbols.

Every candidate must present as a part of the examination a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Physics.

CHEMISTRY. *One unit.* The following outline includes only the indispensable topics which must be studied in the class-room and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. The order of presentation will naturally be determined by the teacher.

OUTLINE. The chief physical and chemical characteristics, the preparation and the recognition of the following elements and their chief compounds: *oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluorine, sulphur, phosphorus, silicon, potassium, sodium, calcium, magnesium, zinc, copper, mercury, silver, aluminum, lead, tin, iron, manganese, chromium.*

More detailed study should be confined to the italicized elements and to a restricted list of compounds, such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, nitric acid, ammonia, sulphur dioxide, sulphuric acid, hydrogen-sulphide, sodium-hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, manufacturing processes, familiar substances (illuminating gas, explosives, baking powder, mortar, glass, steel, common alloys, porcelain, soap).

Attention should be given also to combining proportions by weight and volume; calculations founded on these and on Boyle's and Charles's laws; symbols and nomenclature (with careful avoidance of special stress, since these are non-essential); atomic theory, atomic weights and valency in a very elementary way; nascent state; natural grouping of the elements; solution (solvents and solubility of gases, liquids, and solids; saturation); ionization; mass action and equilibrium; strength (=activity) of acids and bases; conservation and dissipation of energy; chemical energy (very elementary); electrolysis. Chemical

terms should be defined and explained, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but should be taught only so far as is necessary for the correlation and explanation of the experimental facts.

It is recommended that the candidate's preparation in chemistry should include: (1) Individual laboratory work, comprising at least forty exercises; (2) instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations; (3) the study of at least one standard text-book, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.

Every candidate must present as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Chemistry.

BOTANY. *One unit.* The course should include a careful study of the general principles of Anatomy and Morphology, Physiology and Ecology; also the natural history of the plant groups, and classification.

Individual laboratory work by the student is essential and should receive at least double the amount of time given to recitation. Records of the laboratory work, properly certified by the teacher, in which stress is laid upon accurate drawing and precise description, must be presented at the time of examination.

Where special circumstances, such as exceptional difficulty of obtaining material, prevent the completion of the entire amount while allowing its equivalent in thoroughness, it is recommended that some of the minor topics be omitted rather than that the attempt be made to cover all more superficially. To provide for this contingency, the examination papers will always include a number of alternative questions.

This requirement is the same as that of the College Entrance Examination Board in Botany.

PHYSIOGRAPHY. *One unit.* The candidate's preparation should include: (1) The study of one of the leading secondary text-books in physical geography, that a knowledge may be gained of the essential principles and of well-selected facts illustrating those principles; (2) individual laboratory work comprising at least forty exercises. From one-third to one-half of the candidate's class-room work should be devoted to laboratory exercises. In the autumn and spring, field trips should take the place of laboratory exercises. Properly

attested reports of field and laboratory work must be presented at the time of examination.

This requirement is the same as that of the College Entrance Examination Board in Geography.

ASTRONOMY. *One unit.* The requirement in Astronomy demands class instruction in the elementary principles of the science, including observations of the heavens with reference to the positions and movements of the heavenly bodies. The following are the chief topics to be studied: *The Celestial Sphere*: designation of the directions of a heavenly body. *The Earth*: its axial rotation; time, latitude, longitude; its orbital revolution; precession; aberration, the seasons, equation of time, the calendar. *The Moon*: its axial rotation, orbital motion, librations, phases, surface features, physical condition; lunar and solar eclipses. *The Sun*: its rotation, physical characteristics, light, and heat. *The Planets*: apparent and real motions, individual characteristics. *The Law of Gravitation*: its control of the solar system; the tides. *Comets and Meteors*: their nature and motions. *The Stars*: designation, classification by constellations, motions, distance, brightness, variables. *Stellar Systems*: clusters, nebulae; the stellar universe, cosmogony.

As no examination in Astronomy is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University; see pages 31, 32.

ADMISSION TO ADVANCED STANDING

A candidate for admission to advanced standing, unless coming from an approved institution of collegiate rank, will be examined in the studies required for entrance to Brown University (unless admitted by certificate) and in those already pursued by the class which he desires to enter.

A candidate for admission to advanced standing who comes from an approved institution of collegiate rank may receive credit, without examination, for work done at that institution. He will be required, however, to present, or to have had accepted elsewhere, the same entrance subjects as are demanded of students entering Brown University without advanced credit; and to cover, or to have covered, all the prescribed subjects in the course leading to the desired degree at Brown University. The Committee on Registration and Attendance will determine the amount of credit that he may receive, on receipt of the following papers, all of which should be sent to the Registrar of Brown University: (1) a formal statement, made out and signed by the proper official of the institution previously attended, showing all preparatory subjects accepted by it for entrance (specifying whether by examination or certificate), and all the courses attended at college, with their catalogue numbers, and the standing attained therein by the student; (2) a similar official statement as to whether

the student has completed the amount of work regularly required up to the time of his withdrawal from the institution previously attended, or has done work in excess thereof, or of less amount, or has incurred conditions or probation; (3) a marked catalogue of the institution previously attended, describing the subjects taken; (4) a letter of honorable dismissal from the institution last attended.

Every candidate for a bachelor's degree, admitted to advanced standing, must remain in residence at the University at least one year before receiving his degree, and must take in regular course the full amount of work ordinarily required during the academic year.

ADMISSION OF SPECIAL STUDENTS

Mature persons of good character who desire to pursue some special subjects and who have had the requisite preliminary training are allowed to enter the various courses of study in the University without becoming candidates for a degree.

Applicants for registration as special students must present to the Registrar, on or before August 1 if possible, a certified and detailed statement of the nature and extent of their preparatory work, including testimonials of character and ability. In case a student has attended more than one institution, he must present credentials from each of them. Applicants must satisfy the Committee on Registration and Attendance, by passing the entrance examinations or presenting certificates, that they are qualified to pursue the courses desired.

Special students are subject to the same regulations regarding attendance and examinations as candidates for degrees; they must take fifteen hours of class-room work a week unless satisfactory reasons for a smaller assignment are presented.

REGISTRATION AND ENROLMENT OF UNDERGRADUATES

REGISTRATION. In September all new students, whether candidates for a degree or special students, must report at the Administration Building between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on the Monday or Tuesday preceding the opening of the first semester (for 1920, September 20 or 21), and fill out registration cards for the whole of the ensuing year. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged. All new students must present at or before the time of registration all credentials necessary for admission as candidates for a degree or as special students.

In May of each year all undergraduates in residence, whether candidates

for a degree or special students, must obtain at the Registrar's office registration cards, which must be filled out after consultation with the Committee on Electives with a statement of the courses elected for the whole of the ensuing year and returned not later than June 1. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged. *Members of the Class of 1922 who are candidates for the degree of Bachelor of Arts or Bachelor of Philosophy must file their concentration cards with their registration cards.* See Requirements for Concentration, pages 57, 58, 61.

When semester courses are grouped in one paragraph (*e.g.* Biology 1, 2), they constitute a year course and neither semester may be elected independently unless specific statement to the contrary is made. In starred courses a final mark will be given at the end of the course, the mark given at the end of the first semester being regarded as temporary.

Changes in registration will be allowed only on presentation of sufficient reasons to the Committee on Registration and Attendance. Requests for permission to make changes in September should be sent to the Registrar before September 7, if possible. Requests for permission to make changes for the second semester must be presented to the Registrar before the beginning of the examinations of the first semester, unless these requests are the result of failures, in which case they must be presented in writing to the Registrar two days before the opening of the second semester. A fee of three dollars is charged for changes.

The Committee on Registration and Attendance will be in session at the Administration Building between 9 a.m. and 1 p.m. and between 2.30 p.m. and 5 p.m. on the two days preceding the opening of each semester.

ENROLMENT. All students must report at the Registrar's office between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on one of the two days preceding the opening of each semester and have their names checked as enrolled. A receipt from the Comptroller for the required payment of twenty-five dollars must be presented. Failure to report will be treated as late enrolment and a fee of three dollars will be charged.

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REQUIREMENTS FOR DEGREES

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REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

For Students who entered before 1919

I. PRESCRIBED SUBJECTS

Ancient Languages (either Latin or Greek, or both). Six hours. At least three hours must be taken in the Freshman year, and the six hours must be completed by the end of the Sophomore year.

French or German. Six or more hours. Including the amount presented for admission, every student must complete before graduation at least four years' work in French or four years' work in German. A minimum of six hours must be taken in college, of which at least three hours must be taken in the Freshman year. Students who present the full entrance requirement in both Greek and Latin and who elect six hours of Greek and Latin in college will not be required to take more than six hours of modern language in college.

Mathematics. Three hours. Freshman year.

English Composition and Rhetoric. Three hours. First semester, Freshman year. Second semester, Sophomore year.

English Literature. Three hours. Second semester, Freshman year. First semester, Sophomore year.

European History. Three hours. Sophomore or Junior year.

Physical or Natural Science. A three-hour course continuous through the year. Freshman, Sophomore, or Junior year.

Economics, and Social and Political Science. Three hours. Sophomore, Junior, or Senior year.

Philosophy. A three-hour course continuous through the year. Sophomore or Junior year.

II. REQUIREMENTS ARRANGED BY YEARS

FRESHMAN YEAR

I. REQUIRED COURSES. *Latin* or *Greek*, three hours; *French* or *German*, three hours; *Mathematics*, three hours; *English*, three hours.

II. ELECTIVE COURSES. One three-hour course continuous through the year must be chosen from the following list: *Latin, Greek, French, German, Chemistry, Physics, Botany, Biology, Geology, Astronomy, Mechanical Drawing.*

SOPHOMORE YEAR

That portion of the required work in ancient languages, modern languages, and English, not completed in the Freshman year, and other required and elective courses sufficient to make a total of fifteen hours a week.

JUNIOR YEAR

The required History, Philosophy, and Physical or Natural Science, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY

For Students who entered before 1919

I. PRESCRIBED SUBJECTS

Mathematics. Three hours. Freshman year. This subject may be omitted by students who intend to substitute Argumentation in the Sophomore year.

English Composition and Rhetoric. Three hours. First semester, Freshman year. Second semester, Sophomore year.

English Literature. Three hours. Second semester, Freshman year. First semester, Sophomore year.

French or German. Including the amount presented for admission, every student must complete before graduation four years' work in French or four years' work in German. At least three hours must be taken in the Freshman year.

Biology.‡ Three hours. Freshman or Sophomore year.

Physics, Chemistry, Botany, Geology, or Astronomy (only one of this group required). Three hours. Freshman or Sophomore year. This requirement does not apply to students who have presented Physics and Chemistry for admission.

Classical Civilization (Greek 15, Latin 16). Three hours. Freshman or Sophomore year. Freshman year for students who do not take Mathematics.

European History. Three hours. Freshman, Sophomore, or Junior year.

Economics, and Social and Political Science. Three hours. Sophomore, Junior, or Senior year.

‡ Botany may be substituted for Biology in the second semester.

Philosophy. A three-hour course continuous through the year. Sophomore or Junior year.

Argumentation (*English* 7, 8). Three hours. Sophomore year. For students who have not taken Mathematics in the Freshman year.

II. REQUIREMENTS ARRANGED BY YEARS

FRESHMAN YEAR

I. REQUIRED COURSES. *English*; *French* or *German*; *Mathematics* (for students who do not intend to substitute *Argumentation* in the Sophomore year); *Classical Civilization* (*Greek* 15, *Latin* 16) (for students who do not take *Mathematics*).

II. ELECTIVE COURSES. Two three-hour courses continuous through the year must be chosen from the following list: *Latin*, *Greek*, *French*, *German*, *Classical Civilization* (*Greek* 15, *Latin* 16), *History*, *Chemistry*, *Physics*, *Botany*, *Biology*, *Geology*, *Astronomy*, *Mechanical Drawing*.

SOPHOMORE YEAR

That portion of the required work in modern languages not completed in the Freshman year.

Biology; ‡ for students who have not taken this course in the Freshman year.

Physics, *Chemistry*, *Botany*, *Geology*, or *Astronomy*; for students who have not presented both *Physics* and *Chemistry* for admission or taken a course in *Physical Science* in the Freshman year.

Argumentation (*English* 7, 8); for students who have not taken *Mathematics* in the Freshman year.

Classical Civilization (*Greek* 15, *Latin* 16); for students who have not taken this course in the Freshman year.

English.

Other required and elective courses sufficient to make a total of fifteen hours a week.

JUNIOR YEAR

The required *History* and *Philosophy*, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

During the Junior and Senior years a student must take at least four courses outside the department chosen for special work. See Requirements for Concentration, pages 57, 58, 61.

SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

‡ Botany may be substituted for Biology in the second semester.

III. REQUIREMENTS FOR CONCENTRATION

At the close of the Sophomore year each candidate for the degree of Bachelor of Philosophy must choose from the following list a department in which he intends to do special work during the Junior and Senior years, and must elect at least three courses of three hours a year each in this department. If he has not already taken a three-hour year course in the department chosen, he must elect four courses. The selection of these courses must be made in consultation with the head of the department and must be approved by him. When two departments are combined, the selection must be made in consultation with the head of the department first named.

At any time before the beginning of the Senior year a student may, with the approval of the Committee on Registration and Attendance, change the department in which he is to do special work.

With the approval of the department in which the student is doing special work, he may count as the equivalent of one course work which does not require regular class-room attendance.

DEPARTMENTS IN WHICH SPECIAL WORK MAY BE TAKEN

Art.

Art, and Greek Literature and History.

Art, and Roman Literature and History.

Art, and Music.

Art, and History.

Astronomy.

Astronomy, and Civil Engineering.

Astronomy, and Physics.

Astronomy, and Mathematics.

Astronomy, and Geology.

Biblical Literature and History.

Biblical Literature and History, and Greek Literature and History.

Biblical Literature and History, and Philosophy.

Biology.

Botany.

Botany, and Biology.

Chemistry.

Civil Engineering.

Economics.

Education.

Education, and Philosophy.

Education, and Social and Political Science.

Education, and History.

Electrical Engineering.

English.

Geology.

Germanic Languages and Literatures.

Greek Literature and History.

Greek Literature and History, and Roman Literature and History.

Greek Literature and History, and Biblical Literature and History.

Greek Literature and History, and Art.

History.

Mathematics.

Mechanical Engineering.

Mechanics and Mechanical Drawing.

Mechanics, and any Engineering department.

Philosophy.

Physics.

Roman Literature and History.

Roman Literature and History, and Art.

Roman Literature and History, and Greek Literature and History.

Roman Literature and History, and Indo-European Philology.

Romance Languages and Literatures.

Social and Political Science.

NEW REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

For students who entered in 1919 or thereafter

English Composition and Rhetoric. Three hours for two semesters. Students wishing to be excused from this requirement may present themselves for a proficiency test at the beginning of the year. Students who attain a grade of at least *B* in the first semester will be excused from further required work in this subject.

English Literature. Three hours for one semester.

English Literature, or Biblical Literature, or Art, or Music. Three hours for one semester.

Ancient Languages (either Latin, or Greek, or both). Six hours for a year.

Modern Languages. Including that presented for admission, at least two years in one modern language must be completed. One year must be taken in college unless three units, two of which are in one language, are presented for admission.

History. Three hours for a year. Students presenting for admission Medieval and Modern European History, or English History, but not American History, must take a course in American History. Other students must take a course in European History.

Economics and Social and Political Science. Three hours for a year.

Philosophy. A three-hour course continuous through the year.

Mathematics, or Astronomy, or Physics, or Chemistry. A three-hour course continuous through the year.

Biology, or Botany, or Geology. A three-hour course continuous through the year. Students presenting equivalents will be excused by the Committee on Registration and Attendance.

REQUIREMENTS ARRANGED BY YEARS

Freshman Year. Orientation Lectures ; English ; Ancient Language ; Mathematics, or Astronomy, or Physics, or Chemistry ; Biology, or Botany, or Geology ; one other required or elective course.

Sophomore Year. That portion of the requirement in Ancient Languages, English, and History not completed in the Freshman year ; other required and elective courses to make a total of fifteen hours.

Junior Year. The required Philosophy, if not previously taken, and other required and elective courses sufficient to make fifteen hours per week.

Senior Year. All required courses not previously taken, and elective courses sufficient to make fifteen hours per week.

NEW REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY

For students who entered in 1919 or thereafter

English Composition and Rhetoric. Three hours for two semesters. Students wishing to be excused from this requirement may present themselves for a proficiency test at the beginning of the year. Students who attain a grade of at least *B* in the first semester will be excused from further required work in this subject.

English Literature. Three hours for one semester.

English Literature, or Biblical Literature, or Art, or Music. Three hours for one semester.

Foreign Languages. Including that presented for admission, four years in two languages other than English must be completed, at least two of which must be in one modern language. One year must be taken in college unless at least six years are presented for admission.

Classical Civilization. Three hours for a year.

History. Three hours for a year. Students presenting for admission Medieval and Modern European History, or English History, but not American

History, must take a course in American History. Other students must take a course in European History.

Economics and Social and Political Science. Three hours for a year.

Philosophy. Three hours for a year.

Mathematics. Three hours for a year. This does not apply to students entering in 1919, but will be in effect for students entering in 1920. Students presenting by examination two half-units of Mathematics beyond the minimum amount required for admission will be excused from this requirement by the Committee on Registration and Attendance.

Physics, or Chemistry, or Botany, or Geology, or Astronomy. A three-hour course continuous through the year. This requirement does not apply to students who have presented Physics and Chemistry for admission.

Biology. Three hours for one semester. Students presenting equivalents will be excused from this requirement by the Committee on Registration and Attendance.

Biology or Botany. Three hours for one semester. Students presenting equivalents will be excused from this requirement by the Committee on Registration and Attendance. Students electing Botany in the other science group must take Biology.

REQUIREMENTS ARRANGED BY YEARS

Freshman Year. Orientation Lectures; English; Foreign Language; Mathematics; Biology (or Biology and Botany); Physics, or Chemistry, or Botany, or Geology, or Astronomy. Students excused from a portion of this required work will substitute other required courses or electives. With the consent of the Committee on Registration and Attendance one required course may be postponed to the Sophomore year.

Sophomore Year. History; Classical Civilization; that portion of the required work in English not completed in the Freshman year; other required and elective courses to make a total of fifteen hours.

Junior Year. The required Philosophy, unless previously taken, and other required and elective courses sufficient to make fifteen hours per week.

Senior Year. All required courses not previously taken, and elective courses sufficient to make fifteen hours per week.

NEW REQUIREMENTS FOR CONCENTRATION FOR THE DEGREE OF BACHELOR OF ARTS OR BACHELOR OF PHILOSOPHY

For students who entered in 1919 or thereafter

Before the end of the Sophomore year every student must confer with the Committee on Educational Advice and Direction and arrange a coördinated and progressive programme of courses, taking into consideration his scholarly ambitions or his prospective career. This program must comprise at least four year-courses in the case of candidates for the degree of Bachelor of Arts, and five in the case of candidates for the degree of Bachelor of Philosophy; of these at least three and four respectively must be taken in the Junior and Senior year. Not more than one elementary course can be counted in fulfillment of this requirement.

SUMMARY OF CHANGES FROM REQUIREMENTS PREVIOUSLY IN FORCE

Bachelor of Arts, Admission: Total requirement in Language reduced from five units to four (for students presenting Latin), or three (for students presenting Greek) — elective units increased from three to four or five. In place of specific requirement in Ancient History, one unit required in Ancient History, or Medieval and Modern History, or English History, or American History.

Bachelor of Arts, College Requirements: English Composition and Rhetoric: under certain conditions students excused from whole or part of year course previously required. English Literature: in place of year course previously required students allowed to take for the second semester English Literature, or Biblical Literature, or Art, or Music. Modern Language: reduction of two years in amount required in one Language, definite prescription of two year courses in college discontinued. History: required year course to be European or American according to the History presented for admission. Mathematics: in place of year course previously required, students allowed to choose a year course in Mathematics, or Astronomy, or Physics, or Chemistry. Science: in place of general requirement of a year course in science, students required to take a year course in Biology, or Botany, or Geology.

The requirements in Philosophy, and in Economics and Social and Political Science, remain unchanged.

Bachelor of Philosophy, Admission. The three units required in Languages other than English need not include one in Modern Language.

Bachelor of Philosophy, College Requirements: Same changes as for Bachelor of Arts in English Composition and Rhetoric, English Literature, History. Foreign Languages: reduction of two years in amount required in one Modern Language. Science: Botany added to options. Mathematics: no change for students entering in 1919, year course required for students entering in 1920. Under certain conditions students excused from requirement. No change in present requirements in Classical Civilization, Biology, or Biology and Botany, Economics and Social and Political Science, Philosophy.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING

For Students who entered in 1917 or thereafter

FRESHMAN YEAR

Mathematics 17	Mathematics 18
Engineering 1	Engineering 2
Engineering 3	Mathematics 50
English 1	‡ English 48
Chemistry 1, or	Chemistry 2, or
Approved substitute	Approved substitute

If Chemistry is presented for admission, a substitute approved by the department may be elected.

SUMMER VACATION

During part of the vacation between the Freshman and Sophomore years a course in either surveying (*Engineering 5*) or shop practice (*Engineering 6*) is required.

SOPHOMORE YEAR

Mathematics 14	Mathematics 20
Economics 1	Soc. and Pol. Science 1
Physics 1	Physics 2
Engineering 7	Engineering 8
‡ English 49	English 2

‡ Students whose work in English 1 is satisfactory to the department may take English 2 in place of English 48 in the second semester of the Freshman year, and substitute some other course for English 49, 2 in the Sophomore year.

JUNIOR YEAR

Engineering 9	Engineering 10
Engineering 11	Engineering 12
Engineering 13	Engineering 14
Engineering 15	Engineering 16
‡ Approved elective (3 hours)	‡ Approved elective (3 hours)

SENIOR YEAR

Engineering 17	Engineering 18
Engineering 19	Engineering 20
Engineering electives (6 hours)	Engineering electives (6 hours)
‡ Approved electives (6 hours)	‡ Approved electives (6 hours)

REQUIREMENTS FOR THE DEGREE OF BACHELOR
OF SCIENCE IN CIVIL ENGINEERING§

For Students who entered before 1917

SENIOR YEAR

Mech. Engineering 19	Mech. Engineering 20
Mech. Engineering 15	Mech. Engineering 24
Mechanics 3	Mechanics 4
Civil Engineering 37	Civil Engineering 38
Civil Engineering 45	Civil Engineering 40
An elective course	Civil Engineering 34
	Civil Engineering 42 or 46
	Civil Engineering 36

‡ At least one of these electives counting for three hours through the year must be taken in some department not in the Division of Engineering.

§ In this table of requirements the old numbers are, for convenience, retained.

|| In special cases, subject to the approval of the head of the Department of Civil Engineering, courses in Engineering or Science may be substituted for the thesis.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

For Students who entered before 1917

SENIOR YEAR

Mechanics 3	Mechanics 4
Physics 23	Mech. Engineering 24
Elec. Engineering 9	Civil Engineering 18
Elec. Engineering 11	Elec. Engineering 10
Elec. Engineering 17	Elec. Engineering 14
Elec. Engineering 19	Elec. Engineering 16
Mech. Engineering 19	Elec. Engineering 18
‡ An elective course	Elec. Engineering 20
	Mech. Engineering 20
	Civil Engineering 26
	• Physics 14

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

For Students who entered before 1917

SENIOR YEAR

Mech. Engineering 11	Mech. Engineering 12
Mech. Engineering 19	Mech. Engineering 20
Mech. Engineering 5	Mech. Engineering 22
Civil Engineering 43	Mech. Engineering 14
Mechanics 3	Mechanics 4
	Mech. Engineering 24
	Civil Engineering 18
	Civil Engineering 26
Mech. Engineering 25	Mech. Engineering 26
§ An elective course	§ An elective course

‡ A three-hour course, chosen with the approval of the head of the Department of Electrical Engineering.

§ A three-hour elective course through the year, chosen with the approval of the head of the Department of Mechanical Engineering.

REGULATIONS UNDER WHICH A STUDENT MAY TAKE A FIRST DEGREE IN LESS THAN FOUR YEARS

A candidate for a first degree who has maintained a satisfactory standing in his studies may, with the consent of the Committee on Registration and Attendance, take work in addition to the regular number of hours prescribed in the curriculum of the course which he is pursuing.

A student who at the beginning of his Senior year lacks less than thirty semester hours of completing his course may, with the consent of the Committee on Registration and Attendance, distribute his work over the year.

A student who at the beginning of any semester lacks less than fifteen semester hours of completing his course may, for reasons deemed sufficient by the Committee on Registration and Attendance, be excused from taking more than the necessary number of hours.

A candidate for a first degree, who has credit for the required number of hours of work, including all the required subjects, may, at the end of the semester in which his work is completed, be excused from further attendance at the University, and may receive his degree at the Commencement next following such semester.

For conditions under which graduate work may be pursued during the Senior year, see page 70, "Graduate Study."

CREDIT FOR SUMMER WORK. A candidate for a first degree may receive credit for work done at the summer school of an approved institution of collegiate rank, provided that the work have the approval of the head of the corresponding department in Brown University; but no credit will be given for required courses except those specially designated by the Committee on Registration and Attendance in conference with the departments concerned. The amount of credit given at the institution in question will be given at Brown University, but the total credit for work at a summer school in any one summer shall not exceed six semester hours, except as noted below. Applications must be filed at the Registrar's office before Commencement on blanks provided for the purpose.

A candidate for a first degree may, with the consent of the head of a department and with the approval of the Faculty, pursue studies (except required courses) connected with that department during any summer in which he does not attend a summer school, and may receive credit for such studies, provided that the work be done under the supervision of the head of the department concerned and that the candidate pass an examination in all the work before the beginning of the next academic year. The amount of credit will be determined by the head of the department, but the total credit for any one summer shall not exceed three semester hours, except as noted below. Applications must be approved by the head of the department concerned, and must be filed at the Registrar's office before June 1, on blanks provided for the purpose. A

student will not be allowed to do summer work in connection with any department of the University until he has presented to the head of the department a registration card signed by the Registrar.

Students who have no deficiency due to failure and who have an average grade of *B* in all courses to date may receive a maximum credit of nine semester hours for work at a summer school, or a maximum credit of six semester hours for work done under the supervision of a department. Such students will also be allowed to continue or supplement work done at a summer school by work done under the supervision of a department in such manner that a summer school credit of two semester hours may be extended in the same subject to three semester hours, two summer school credits of two hours each may be extended in the same subjects to three semester hours each, or a summer school credit of four semester hours in one subject may be extended in the same subject to six semester hours. In no other manner will credit be allowed both for work done at a summer school and for work done under the supervision of a department during the same summer.

ATTENDANCE, STANDING, AND EXAMINATIONS

ATTENDANCE. Every student is required to attend every session of the classes in which he is registered, including gymnasium, and also the daily chapel service.

STANDING. A record is kept of every student's attendance and of his proficiency in his several studies. At the close of each semester a report is sent to the parent or guardian of every undergraduate student containing a record of all his absences from required exercises, and indicating his standing in each of his studies for the semester, including any deficiency. A student who, in any semester, has failed in three or more courses counting for more than eight hours a week, will not be registered again without special action of the Committee on Registration and Attendance.

There are four pass grades: *A*, *B*, *C*, *D*. No student will be allowed to graduate who has not attained a grade above *D* in at least sixty semester hours of college work.

E is assigned to those who have failed to pass; or to those whose work during the semester has been so unsatisfactory that, in the opinion of the instructor, they should not be allowed an examination; or to those who, in a laboratory course, have not completed half the work required.

O is assigned to those who have been absent one-half the time in a course, or to those whose absence from the examination is not excused by the Dean.

A student who receives the mark *E* in a required course must repeat the course; except that in required courses designated by the Committee on Registration and Attendance, in conference with the department concerned, a failure may be made up by work at an approved summer school. A student who receives the mark *E* in an elective course may substitute some other course approved by the Committee on Registration and Attendance, or he may take an equivalent amount of approved summer work.

I is assigned to those whose semester work is incomplete, but satisfactory so far as done. All incomplete work must be made up before the middle of the following semester. If this requirement is not met, the mark will be changed to *E*, unless an extension of time is granted by the Committee on Registration and Attendance.

Abs. is assigned to those who have been absent from examination, unless *E* has already been assigned on the basis of the work during the semester.

A student whose semester work is incomplete and who is absent from the examination is assigned the marks *I* and *Abs.*

EXAMINATIONS. All classes are examined at the close of each semester. A student is not admitted to the examination in a study in which he has received the mark *E* or *O*.

Examinations other than the regular semester examinations are given only to students who have received the mark *Abs.* and whose absences have been excused by the Dean, and to candidates for advanced standing; but candidates for the degree of Bachelor of Science who have failed in a first examination may, at the discretion of the department concerned, be allowed a second examination, subject to the regulations below. Such students must present to the department satisfactory evidence that the work of the course has been thoroughly reviewed.

A student is not admitted to a special examination except on written authorization from the Registrar. If the examination is taken to remove the mark *Abs.* or *E*, the student must pay to the Registrar a fee of two dollars.

Special examinations upon the work of the first semester are given only during the following spring recess. Special examinations upon the work of the second semester are given only in the following September on as many days as may be necessary preceding the opening of the academic year, except that special examinations on the work of the second semester of the Senior year are given on the Saturday and Monday after the examination period in June.

Students desiring special examinations in the spring recess must make application to the Registrar not later than March 1, specifying the subjects in which examinations are desired. On or before March 15 a schedule of special examinations will be posted. Students desiring special examinations in September must make application to the Registrar not later than August 15, specifying the subjects in which examinations are desired. A schedule of the September examinations is sent about September 1 to the students concerned.

Special examinations at times other than those scheduled are allowed only by consent of the Committee on Registration and Attendance.

Special examinations for advanced standing are, so far as possible, arranged at the times assigned for other special examinations.

EXAMINATIONS TO REMOVE ENTRANCE CONDITIONS. Students who enter with conditions in English 1, English 2, Algebra, or Plane Geometry are required to take regular instruction in these subjects during the Freshman year under a tutor approved by the department concerned. A special examination will be given on completion of the work, but in no case before the close of the Christmas recess.

Students who fail to meet the entrance requirements in English or Mathematics before the beginning of the Junior year will not be allowed to register until these deficiencies have been removed.

Freshmen who have entrance conditions in subjects other than English, Algebra, or Plane Geometry may remove the conditions by passing the regular

mid-year entrance examinations. Applications must be filed with the Registrar before January 15, on blanks provided for the purpose. No student who has failed in an entrance examination will be granted a second examination at any time other than September, except on presentation of a tutor's certificate that he is prepared for such examination, and on payment of a fee of two dollars. No entrance examinations other than those appointed above will be held unless ordered by the Committee on Registration and Attendance.

Students who enter with conditions in Language, Science, History, Solid Geometry, Plane Trigonometry, or Advanced Algebra, must remove these conditions, by examination, before the beginning of the Sophomore year; otherwise such conditions will be regarded as deficiencies in college work and the students required to take extra courses in the departments in which the deficiencies occur, the amount and selection of the courses to be determined by the Committee on Registration and Attendance in consultation with the departments.

GRADUATE STUDY

OPPORTUNITY for advanced study in Brown University is open to two classes of students:

(1) Students who have received the bachelor's degree (other than the degree of Bachelor of Education) from Brown University or from some other college whose requirements for the degree are substantially equivalent.

(2) Students in the Senior class in Brown University who have received an average mark of *B* throughout their course, and who require not more than twelve semester hours for the completion of their work for the bachelor's degree.

Subject to conditions stated below, students of these two classes may be enrolled as candidates for advanced degrees, by vote of the Faculty on recommendation of the Dean of the Graduate Department. If not so enrolled, they are designated as special graduate students. An undergraduate candidate for an advanced degree is not permitted to take more than twenty-one hours in a single semester.

REGISTRATION OF GRADUATE STUDENTS. Not later than the eighth day of the first semester, every candidate for registration as a graduate student must file with the Dean of the Graduate Department, on a blank provided for the purpose, an application designating the courses he desires to take during the ensuing year. This application must be approved by the professor in charge of each course. If not a student or graduate of Brown University, he must file with his application his diploma or other evidence of holding the bachelor's degree, together with a marked catalogue or detailed statement showing the courses he has pursued. On completion of these requirements the Dean will issue a blank authorizing the candidate to register at the Registrar's office in the courses to be taken. This blank, together with a receipt from the Comptroller for the advance payment on the bill for the semester, must be presented to the Registrar before any classes are attended. An authorization blank will not be required for the second semester unless a change in courses has been made. Registration for the second semester must be completed within three days after the opening of the semester. Registration later than the days designated is permitted only on payment of a fee of three dollars.

REQUIREMENTS FOR ADVANCED DEGREES

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS. To become a candidate for the degree of Master of Arts, the student must hold (or, if an undergraduate student, be a candidate for) a bachelor's degree other than a degree given for technical work.

To obtain the degree of Master of Arts, the candidate must complete a year of graduate study of not less than thirty semester hours. The work may be all

in one subject, but may not be in more than three, that is, a major subject and one or two minor subjects chosen with the approval of the professor in charge of the major subject. It shall be arranged according to a coherent plan by the professor in charge of the major subject. An essay or report is required in the major subject and a final oral examination may be required at the option of the professor in charge of the major subject. The degree is granted only on the written recommendation of the professor in charge of the major subject.

Graduate Work Done in Other Institutions. Graduate work done in residence in another institution and not used in fulfilment of the requirements for an advanced degree elsewhere may be offered in partial fulfilment of the requirements for the degree of Master of Arts, provided it shall have the approval of the Dean of the Graduate Department and the professors in charge of the student's work; but the equivalent of at least eighteen semester hours must be done in residence at Brown University.

Undergraduate Credit. A graduate of Brown University who has to his credit undergraduate courses in which he has received a grade of *A* or *B*, which have not been counted toward the bachelor's degree, may offer such courses in partial fulfilment of the requirements for the degree of Master of Arts, provided they conform to the requirements for the degree.

Graduate Students in Undergraduate Courses. When a graduate student pursues courses regularly open to undergraduates, only those courses in which the grade of *A* or *B* has been received shall be counted toward the degree.

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE.

To become a candidate for the degree of Master of Science, the student must have completed, or plan to complete, in addition to his work for the degree, sixty semester hours in mathematics and the sciences.

To obtain the degree of Master of Science, the candidate must complete a year of graduate study of not less than thirty semester hours in mathematics, engineering, physics, chemistry, astronomy, the biological sciences, psychology, or the geological sciences, in addition to the sixty hours, specified above, in mathematics and the sciences. The work may be all in one subject, but may not be in more than three, that is, a major subject and one or two minor subjects chosen with the approval of the professor in charge of the major subject. It must be arranged according to a coherent plan by the professor in charge of the major subject. A report of an investigation or a thesis is required in the major subject and a final oral examination may be required at the option of the professor in charge of the major subject. As a substitute for the report an advanced six-hour laboratory course, extending through the year, may be accepted by the professor in charge of the major subject. The degree is granted only on the written recommendation of the professor in charge of the major subject.

The provisions in regard to work done in other institutions, undergraduate credit, and grades to be obtained in courses open to undergraduates are the same as for the degree of Master of Arts.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY. To become a candidate for the degree of Doctor of Philosophy, the student must choose a major and a minor subject. His course as a whole must be arranged according to a coherent plan by the professor in charge of the major subject and must be approved by the Dean of the Graduate Department. The courses in the minor subject must be approved by the professor in charge of that subject. The full statement of the course, including the subject of the thesis (see below) and the languages in which the student is to be examined (see below), must be filed with the Dean of the Graduate Department not later than October 15 of the last year of candidacy. Candidates who fulfil the requirements stated below are recommended for the degree by vote of the Faculty on recommendation by the Dean of the Graduate Department and the professors in charge of the major and minor subjects.

The candidate must possess a comprehensive knowledge of his major and minor subjects, attested in writing by the professors in charge of those subjects and by a public examination conducted by the Dean of the Graduate Department, the officers of professorial rank in the departments in which the major and minor subjects are taken, and such other members of the Faculty as that body may appoint. This examination will be held not later than June 1 of the last year of candidacy, on a date set by the Dean of the Graduate Department. Application for examination must be made by the candidate to the Dean of the Graduate Department by April 1 of the last year of candidacy.

The candidate must present a thesis on a topic related to his major subject, embodying the results of original research, giving evidence of high scholarship, and constituting a contribution to knowledge. The thesis must have the written approval of the professor in charge of the major subject, and must be presented to the Dean of the Graduate Department in typewritten copy or in print before April 15 of the last year of candidacy. It will be accepted as satisfying the requirements for the degree only when approved by the Faculty and when either the thesis as a whole, or a summary of the essential facts and conclusions which it embodies, has been printed.‡

The candidate must possess a reading knowledge of at least two foreign languages (in addition to any language which may constitute his major subject) sufficient for the purposes of his special studies, such languages to be designated by the professor in charge of the major subject. He will be examined in these languages before December 1 in the last year of his candidacy by a committee consisting of the Dean of the Graduate Department, representatives of the departments in charge of the major and minor subjects, and representatives of the language departments concerned. The requirements for this degree being qualitative rather than quantitative, no definite statement of the time required

‡ In lieu of the thesis or summary in printed form, a summary with a cash deposit, sufficient to cover the expense of printing, may be accepted. If the thesis, or summary, is printed by the author within a year after receiving his degree, and copies thereof are furnished to the University, the deposit will be returned. Otherwise the summary will be printed by the University.

for obtaining the degree can be made, but in no case will the degree be granted for less than two years of graduate work, and the time required will usually be three or four years.

Work Done in Other Institutions. Graduate work done in residence at another institution, prior to enrolment in Brown University, and not used in fulfilment of the requirements for the degree of Doctor of Philosophy elsewhere, may be offered in partial fulfilment of the requirements for the degree, provided it shall have the approval of the Dean of the Graduate Department and the professors in charge of the major and minor subjects, but in no case shall the degree be granted to a candidate who has not completed a continuous year of work (other than work on his thesis) at Brown University.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PUBLIC HEALTH. The purpose of the course leading to this degree is to fit students for administrative and research work in connection with the public health service. The general requirements for candidacy and for the granting of the degree are the same as for the degree of Doctor of Philosophy. The major subject must be in the Department of Biology.

THE SCHOOL OF EDUCATION†

ADMISSION TO CANDIDACY FOR THE DEGREE OF BACHELOR OF EDUCATION. To be admitted as a candidate for the degree of Bachelor of Education, an applicant must have been graduated from an approved normal school that requires two years of professional and academic study, and must satisfy the University's entrance requirements for the degree of Bachelor of Arts or Bachelor of Philosophy, either by presenting an entrance certificate or by passing examinations in the required subjects (see pages 23-45). In addition the applicant must present: (1) an official record of his or her preparatory school course; (2) an official record of his or her normal school course; (3) a marked catalogue of the normal school, describing the course of study; (4) a diploma or certificate of graduation from the normal school; and (5) a letter of special recommendation from the principal of the normal school.

Graduates of approved normal schools who present satisfactory evidence of at least two years' successful experience in teaching will be admitted as candidates for the degree of Bachelor of Education without examination; but if later, because of failure in college studies, their preparation is deemed insufficient, they will be required to pass examinations in any or all of the subjects required for entrance. Such candidates must present all the credentials listed above, except the letter of special recommendation.

The Committee on Registration and Attendance will determine the amount of credit for entrance and advanced subjects to be given to all applicants for

† A special circular, *The School of Education*, may be obtained from the Registrar.

admission to the School of Education. Entrance certificates and other credentials should be sent to the Registrar of the University; applications for entrance examinations should be filed with the Registrar on or before August 1, if possible.

ADMISSION OF SPECIAL STUDENTS. Mature persons of good character, who desire to pursue special subjects and who have had the requisite preliminary training, are allowed to enter the various courses of study in the School of Education without becoming candidates for a degree.

Applicants for registration as special students must present to the Registrar of the University (if men), or to the Dean of the Women's College (if women), on or before August 1, if possible, a certified and detailed statement of the nature and extent of their preparatory work, including testimonials of character and ability. If a student has attended more than one institution, credentials must be presented from each of them. Applicants must satisfy the Committee on Registration and Attendance, by passing the entrance examinations or presenting certificates, that they are qualified to pursue the courses desired.

Special students must take fifteen hours of class-room work a week unless satisfactory reasons for a smaller assignment are presented at the time of registration.

ADMISSION OF GRADUATE STUDENTS. Persons who are eligible for admission to the Graduate Department of the University may be admitted to the School of Education as graduate students. Graduate students in the School of Education will be registered also in the Graduate Department of the University, and will be subject to the regulations, conditions, and requirements of that department (see pages 62-65).

REGISTRATION AND ENROLMENT. The regulations governing the registration and enrolment of students in the other undergraduate departments of the University (see page 47) apply to students in the School of Education. Women students will present themselves for registration and enrolment at the office of the Registrar of the Women's College, in Pembroke Hall.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF EDUCATION. All candidates for the degree of Bachelor of Education are required to complete a course of fifteen hours of class-room work a week, for each of two years, as follows :

FIRST YEAR.

English 1, 2. Three hours, unless the student is excused on evidence of proficiency in English composition.

Physical or Natural Science, or Mathematics. Three hours.

Two subjects from the following group : *Ancient or Modern Literature; History; Economics, and Social Science or Political Science.* Six hours.

One free elective, or two free electives if the student is excused from English 1, 2. Three hours.

SECOND YEAR.

Education. Three hours.

Philosophy. Three hours.

The subject in the first-year group (*Literature, History, Economics*) not taken in the first year. Three hours.

One elective in continuation of a subject taken in the first year. Three hours.

One free elective. Three hours.

Persons who take the degree of Bachelor of Education in Brown University may obtain the degree of Bachelor of Arts or Bachelor of Philosophy by an additional year's work that satisfies the requirements for the degree chosen.

The fees for men undergraduates in the School of Education are the same as those for other undergraduates specified under the heading "New University Fees" on pages 128, 129. The fees for women are the same as for other undergraduate women. All charges for the semester, including room rent, board, and laboratory fees, if any, must be paid in advance at registration for each semester. Candidates for graduation in any year must pay all graduation fees at the beginning of the second semester of that year.

The rules concerning attendance, standing, and examinations (see pages 59-61) apply to undergraduates in the School of Education.

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MAY 11 1920

COURSES OF INSTRUCTION

WHEN semester courses are grouped in one paragraph (e.g. Biology 1, 2), they constitute a year course and neither semester may be elected independently unless specific statement to the contrary is made. In starred courses a final mark covering the work of the course as a whole is given at the end of the course, the mark given at the end of the first semester being regarded as temporary. When the time of meeting is not announced, it will be arranged by the instructor at the beginning of the semester.

I. ART ‡

FRANCIS GREENLEAF ALLINSON, PH.D., *David Benedict Professor of Greek Literature and History, Director of the Museum of Fine Arts*

JOHN SHAPLEY, PH.D., *Assistant Professor of Art*

11, 12. *General History of Art*

A comprehensive introduction to the subject. Lectures, reading, reports. Dr. SHAPLEY.

Three hours. Through the year. Elective for Undergraduates. Either semester may be elected independently. *Mon., Wed., Fri., at 10.20.*

15,* 16.* *Freehand Drawing*

Training of hand and eye by study in charcoal and pencil of casts and still-life objects.

One hour. Two hours of drawing. Through the year. Elective for Undergraduates. Given at the Rhode Island School of Design. Hours to be arranged with the Director of the School of Design.

17,* 18.* *Advanced Drawing*

Three hours. Six hours of drawing, or four hours of drawing and one hour lecture on Historic Ornament. Through the year. Elective for students who have credit for or are taking 11, 12, and who have credit for 15, 16. Given at the Rhode Island School of Design. *Mon., Tu., Wed., at 2.* Lecture hour to be arranged with the Director of the School of Design.

[19. *Museum Methods*]

General purpose, arrangement, and management.

Three hours. First semester. Elective for students who have credit for or are taking 13. Not offered in 1919-20; to be offered in 1920-21.

‡ For arrangements with the Rhode Island School of Design, see page 166.

[20. *Museum Material*]

Detailed classification, analysis, and publication.

Three hours. Second semester. Elective for students who have credit for or are taking 14. Not offered in 1919-20; to be offered in 1920-21.

21, 22. *Art Seminary*

Research work arranged to meet the needs of individual students.

Dr. SHAPLEY.

Three to twelve hours. Through the year. Elective for Graduates and approved Undergraduates.

23, 24. *Journal Club*

A study of contemporary investigation and criticism based on current periodicals. Dr. SHAPLEY.

Three hours. Through the year. Elective for Graduates and approved Undergraduates.

II. ASTRONOMY

ROLAND GEORGE DWIGHT RICHARDSON, PH.D., *Professor of Pure Mathematics, Acting Director of the Ladd Observatory*

CLINTON HARVEY CURRIER, A.M., *Assistant Professor of Mathematics*

1, 2. *Descriptive Astronomy*

Professor CURRIER.

Three hours. Through the year. Elective for candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who have credit for or are taking Plane Trigonometry. *Mon., Wed., Fri., at 9.20.*

[7, 8. *Advanced Astronomy*]

Three hours. Through the year. Elective for approved students. Not offered in 1919-20.

III. BIBLICAL LITERATURE AND HISTORY†§

HENRY THATCHER FOWLER, PH.D., *Professor of Biblical Literature and History*

MARION EMMETT BRATCHER, PH.D., *Lecturer in Biblical Literature and History*

LANGUAGES

1, 2. *Elementary Hebrew*

Grammar; exercises in writing Hebrew; translation of parts of Genesis. *Dr. BRATCHER.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 8.*

3, 4. *Historical Hebrew*

Reading of Genesis, Samuel, and Kings with special attention to the acquisition of a vocabulary; review of the elements of Hebrew grammar and study of syntax. *Professor FOWLER.*

Three hours. Through the year. Elective for students who have credit for 1, 2. *Mon., Wed., Fri., at 10.20.*

5, 6. *Hebrew Literature*

Critical translation and study of the characteristics and development of some one of the great divisions of Hebrew literature — Psalm, Wisdom, Legal, or Prophetic. *Professor FOWLER.*

Three hours. Through the year. Offered if applied for by students who have credit for 3, 4. *Fri. at 9.20.*

7. *Textual Criticism of the Old Testament*

The principles and method of textual criticism, in connection with the study of one of the shorter prophetic books. *Professor FOWLER.*

Three hours. One semester. Offered if applied for by students who have credit for 3, 4.

[9, 10. *Elementary Arabic*]

Grammar; exercises in writing Arabic; translation of prose selections.

Three hours. Through the year. Elective for Seniors and Graduates. Not offered in 1919-20.

† For conditions under which students may receive credit in the Newton Theological Institution for work done in this department, see pages 166, 167.

§ For courses for the training of leaders in Religious Education, see pages 150, 151.

11, 12. *Gospels and Epistles*

Characteristics of Hellenistic Greek; translation, and investigation of date, authorship, and thought. First semester: the Gospel and Epistles of John, the Gospel of Mark. Second semester: the Gospels of Matthew and Luke. *Professor FOWLER or Dr. BRATCHER.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Either semester may be elected independently. *Tu., Th., Sat., at 10.20.*

[13, 14. *Acts and Pauline Epistles*]

First semester: Acts and Thessalonians. Second semester: Galatians, Corinthians, and Romans.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1919-20.

[23, 24. *Alexandrian Jewish Literature*]

Translation from the Septuagint and writings of Philo.

Three hours. Through the year. Elective for students who have an adequate knowledge of Greek. Not offered in 1919-20.

[25, 26. *Elementary Syriac*]

Readings from the New Testament and from selected Syriac writers with a gradual presentation of the grammar in its simplest form.

Three hours. Through the year. Elective for Graduates. Offered but not given in 1919-20.

LITERATURE AND HISTORY IN ENGLISH

[15, 16. *Old Testament Literature and History*]

Includes nearly the entire Old Testament literature and history. Emphasis placed upon the connection between the literature and the history. With 17, 18 gives a comprehensive view of Biblical literature and history. The books are read in the best English translations. First semester: early Semitic history; Hebrew literature and history to the close of the United Kingdom. Second semester: Hebrew and Jewish literature and history from the division of the kingdom to the conquest of Alexander.

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Either semester may be elected independently. Not offered in 1919-20.

17, 18. *New Testament Literature and History*

Includes a large part of the Jewish writings from the conquest of Alexander to the destruction of Jerusalem, and the entire New Testament studied in its Jewish setting. Emphasis placed upon the connection between the literature and the history. With 15, 16 gives a comprehensive view of Biblical literature and history. The books are read in the best English translations. First semester: Jewish literature and history from the beginning of the Greek period to the destruction of Jerusalem; the Gospels and other sources for the life of Christ. Second semester: outline of the life of Christ; literature and history of the Apostolic Age. *Professor FOWLER.*

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Either semester may be elected independently. *Tu., Th., Sat., at 11.20.*

21,* 22.* *Biblical Seminary*

Subject for 1919-20: The Teachings of Jesus. Critical examination of the content of the teachings in the earliest sources; individual investigation of the teachings upon particular themes. *Professor FOWLER.*

Three hours. Through the year. Elective for Graduates and approved Juniors and Seniors. *Mon., 2.30 to 4.30.*

27. *The Origin and Growth of the Hebrew Religion*

A survey of the history of the Hebrew religion in its relation to primitive Semitic ideas and to the course of Israel's political and social development from the federation of tribes at Sinai to the beginning of the Christian era. Traces the rise and development of the ethical monotheism which lies at the basis of modern Judaism, Mohammedanism, and Christianity. *Dr. BRATCHER.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 12.20.*

28. *Social Teachings of the Prophets and Jesus*

Historical study of the principles underlying the social teachings of the Hebrew prophets and sages, and their interpretation in modern terms; Jesus' conception of the ideal social order, and the means by which it is to be established. *Dr. BRATCHER.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates.

30. *History of Religion*

An outline study of the history of the principal religions of the world. This course is the same as Philosophy 30. *Professors FOWLER and JONES.* Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 10.20.*

IV. BIOLOGY

ALBERT DAVIS MEAD, PH.D., Sc.D., *Professor of Biology*
 FREDERIC POOLE GORHAM, A.M., *Professor of Bacteriology*
 HERBERT EUGENE WALTER, PH.D., *Associate Professor of Biology*
 PHILIP HENRY MITCHELL, PH.D., *Assistant Professor of Physiology*
 JOHN BURNHAM FERGUSON, A.B., M.D., *Demonstrator in Anatomy*

1, 2. *General Biology*

The structure of animals; elementary vital phenomena; the functions of organs; the development of organisms; the principles upon which modern hygiene and sanitation are based, lectures on personal hygiene and care of the body, the causes, methods of transmission, and prevention of communicable diseases; discussion of the more important biological theories, such as evolution, natural selection, variation, mutation and heredity. The course will introduce the student to the use of the microscope, laboratory technic, and scientific methods of observation and experiment. *Professor GORHAM.*

Three hours. Six hours of attendance. Through the year. Required in the Freshman or Sophomore year of candidates for the degree of Bachelor of Philosophy. ‡ Elective for Undergraduates. Lectures, *Mon., Th., Fri., at 3.* Laboratory fee, \$4.50 a semester.

3, 4. *Comparative Anatomy of Vertebrates*

The structure and significance of the various organs of vertebrates with particular reference to man. Intended not only for general students, but also for those who are particularly interested in zoölogy and for those who expect to study medicine. Students are permitted to attend clinics and autopsies at the Rhode Island Hospital. Laboratory work and lectures. *Professor WALTER.*

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors who have credit for 1, 2. *Mon., Wed., Fri., at 8.* Laboratory fee, \$4.50 a semester.

‡ Botany 20 may be substituted for Biology 2. See page 85.

5, 6. *Anatomy of the Nervous System*

A study of the gross and microscopic anatomy of the brain, nerves, and sense organs in man and other vertebrates. Designed particularly for those intending to study medicine or psychology. *Professor MEAD.* Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1, 2. By written consent of the department this course may be elected for six hours. Laboratory fee, \$4.50 a semester.

7, 8. *Embryology and Histology*

The origin of the individual and the developmental process from the egg to the adult; the material basis of heredity; the composition of the body and its organs in terms of their vital units, the cells. Practice in micro-technic. Adapted to the needs of general students and of those intending to study medicine. *Professor MEAD.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1, 2. *Tu., Th., Sat., at 8.* By written consent of the department this course may be elected for six hours. Laboratory fee, \$4.50 a semester.

[9, 10. *Advanced Histology and Pathology*]

Work in micro-technic and in normal and pathological histology. Adapted to individual needs.

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 1, 2, and 7, 8. Laboratory fee, \$4.50 a semester. Not offered in 1919-20.

12. *General Physiology*

General vital processes in plants and animals; the more special phenomena in higher animals, with their bearing on human physiology. Designed not only as an introduction to further work, but also as a general view of physiology. Lectures and laboratory work. *Professor MITCHELL.*

Three hours. Six hours of attendance. First semester. Must be preceded by 1, 2 and Chemistry 1, 2. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Mon., Wed., Fri., at 11.20.* Laboratory fee, \$4.50 a semester.

13, 14. *Chemical Physiology*

The chemistry of proteins, carbohydrates, and fats; the physiology of the digestive system, with the study of secretions and of artificial salivary, gastric, and pancreatic digestions; examination of blood,

bile, and urine; the analysis of foods, particularly milk. Designed for those who are interested in physiology either from a medical or a general standpoint, and for those who are specializing in chemistry and desire a knowledge of vital chemical processes. *Professor MITCHELL.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for or are taking Organic Chemistry 7, 8. *Tu., Th., Sat., at 10.20.* By written consent of the department this course may be elected for six hours. Laboratory fee, \$4.50 a semester.

[15. *Invertebrate Zoölogy*]

A study of the natural history of invertebrate animals, particularly marine forms, insects, and protozoa. Lectures with laboratory and field work.

Three hours. Six hours of attendance. First semester. Elective for Undergraduates who have credit for 1, 2. Offered but not given in 1919-20. Laboratory fee, \$4.50.

46. *Natural History*

A continuation of 15, although 15 is not a prerequisite, including a study of birds during the spring migration. Lectures with laboratory and field work. *Professor WALTER.*

Three hours. Six hours of attendance. Second semester. Elective for Undergraduates who have credit for 1, 2. *Tu., Th., Sat., at 8.* Laboratory fee, \$4.50.

16. *Bacteriology*

A general discussion of bacteria in all their relations, with special attention in the laboratory to the methods of studying bacteria, including the isolation and determination of unknown species. Lectures and laboratory work. *Professor GORHAM.*

Three hours. Six hours of attendance. Second semester. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Mon., Wed., Fri., at 10.20.* Laboratory fee, \$4.50.

17, 18. *Advanced Bacteriology*

Practical work in the qualitative and quantitative biological examination of water, milk, air, soil, and sewage; study of the more common pathogenic organisms, with the determination of their pathogenic properties, and the methods of bacteriological diagnosis of disease. Laboratory work and seminary. *Professor GORHAM.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 16. *Mon., Th., at 4.30.* Laboratory fee, \$4.50 a semester.

27, 28. *Advanced Bacteriology*

A continuation of 17, 18, with special reference to serological diagnosis and immunity. Laboratory work and seminary. *Professor GORHAM.* Three hours. Six hours of attendance. Through the year. Elective for Seniors and Graduates who have credit for 16, and 17, 18. Laboratory fee, \$4.50 a semester.

22. *Evolution*

The history of biology, principles of classification, geographical distribution, heredity, natural selection, variation, Mendelism, and the relationship of man to the lower animals. Designed more particularly for those who have not studied biology. Lectures and assigned reading. *Professor MEAD.*

Three hours. Second semester. Elective for Juniors and Seniors. *Tu., Th., Sat., at 11.20.*

33, 34. *Biological Research*

Research work arranged to meet the needs of individual students. *Professors MEAD and WALTER.*

Three to twelve hours. Through the year. Elective for Graduates.

35, 36. *Advanced Physiology*

General physiology of the cell; fundamental chemical and physico-chemical reactions of life; physiology of the muscular, nervous, and circulating systems; nutrition, chemistry of food, metabolism, dietetics. Laboratory work and seminary. *Professor MITCHELL.*

Three hours. Through the year. Elective for Seniors and Graduates who have sufficient knowledge of chemistry and physiology. Laboratory fee, \$4.50 a semester.

37, 38. *Bacteriological Research*

Research work arranged to meet the needs of individual students. *Professor GORHAM.*

Three to twelve hours. Through the year. Elective for Graduates who have credit for 16 and 17, 18; 27, 28.

39, 40. *Biological Theories and Problems*

Seminary course. *Professor MEAD.*

One to three hours. Through the year. Elective for Graduates.

41, 42. *Zoölogical Seminary*

Reading and discussion of German zoölogical literature selected with reference to the needs of individual students. *Professor WALTER.*

One to three hours. Through the year. Elective for Graduates.

43, 44. *Physiological Research*

Research work arranged to meet the needs of individual students. *Professor MITCHELL.*

Three to twelve hours. Through the year. Elective for Graduates.

V. BOTANY

CARROLL WILLIAM DODGE, PH.D., *Instructor in Botany*

JAMES FRANKLIN COLLINS, PH.B., *Demonstrator in Botany*

_____, *Instructor in Botany*

20. *Elementary Botany*

Designed to give a general knowledge of plant life and its relation to human welfare. Laboratory work includes a study of a representative of each of the great groups of plants and a more detailed study of the anatomy and physiology of the seed-producing plants. Lectures and field trips. *Dr. DODGE.*

Three hours. Six hours of attendance. Second semester. May be taken in the Freshman or Sophomore year in place of Biology 2 in partial fulfilment of the requirement in Biology for the degree of Bachelor of Philosophy. Elective for others by permission. *Mon., Th., Fri., at 3.* Laboratory fee, \$1.50.

1, 2. *General Course*

First semester: The general anatomy of seed plants, followed by an elementary treatment of the physiology of all plant life, and its relation to human welfare. Second semester: A detailed study of representatives of each of the great groups of plants with special attention to the reproductive organs and the evolution of sex; classification and distribution of plants and an elementary treatment of the theories of heredity and evolution. Lectures and field trips. *Dr. DODGE.*

Three hours. Six hours of attendance. Through the year. Elective for Undergraduates. May be elected instead of 20 by special permission. *Mon., Wed., at 8.* Laboratory fee, \$1.50 a semester.

[3, 4. *Physiological Anatomy*]

Intended for students who expect to study medicine, agriculture, forestry, or plant pathology, as well as for those who expect to teach or pursue further work in botany. The origin, minute structure, and physiological function of plant tissues; reproduction, cytology; methods in micro-technic. The biological purpose of this course is to help the student to understand how plants, by the differentiation of cells and their association into tissues adapted to perform different kinds of work, are able to meet the conditions of their environment.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2, or its equivalent. By written consent of the department this course may be elected for six hours. Laboratory fee, \$4.50 a semester for each three hours of credit. Not offered in 1919-20.

[5, 6. *Comparative Morphology and Phylogeny*]

Designed not only for general students, but for those who expect to teach, and for those who are particularly interested in botany. Presents a wide range of scientific methods in plant biology, a comprehensive knowledge of plant forms, and the more fundamental conclusions of morphology and phylogeny; methods in micro-technic.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2, or its equivalent. Laboratory fee, \$4.50 a semester. Not offered in 1919-20.

18. *Taxonomy*

Enough morphology will be presented to give an insight into the reasons underlying classifications of plants; the history of botanical codes of nomenclature and a detailed study of the present International Code; the proper use of herbaria and reference works. A special effort will be made to acquaint the student with the local flora. Field trips. *Dr. DODGE.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 20, or 1, 2. Laboratory fee, \$1.50.

13. *Fungi*

Includes a study of the Brussels Congress modifications of the International Code and the Code prepared by the Society of American

Bacteriologists. Field trips. Plant and animal pathogens will be emphasized as far as possible, but a detailed consideration of the phenomena of parasitism and saprophytism will be given in 14. *Dr. DODGE.*

Three hours. Six hours of attendance. First semester. Elective for students who have credit for 20, or 1, 2. Laboratory fee, \$1.50.

14. *Phytopathology*

A general course including the cultivation and identification of plant pathogens and common saprophytes of economic importance; the relations of parasite and host, manner of infection, and methods of prevention and control of the common plant diseases. Laboratory work largely devoted to acquiring a pathological technique. *Dr. DODGE.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 13 or Biology 16. Attention is invited to 16 in connection with this course. Laboratory fee, \$4.50.

11, 12. *Physiology*

Includes a review of the chemistry of colloids, diffusion and surface tension phenomena and ions in their relation to the fundamental properties of the cell; osmotic pressure and permeability; transpiration, mineral nutrients, photosynthesis and carbohydrate metabolism, enzymes and respiration, growth and movements, irritability and the general relations to heat, light, and electricity, and the physiology of reproduction. *Dr. DODGE.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates, who have credit for 18 or 13, 14, or Biology 12 or 13, 14. Chemistry 53, 54 or its equivalent and a reading knowledge of French or German are very desirable, but not required. Laboratory fee, \$4.50 a semester.

7, 8. *Botanical Research*

Research, including the preparation of a thesis. *Dr. DODGE.*

Hours and credits to be determined individually. Elective for Graduates and approved Seniors.

15, 16. *Field Botany*

Field trips will be organized weekly throughout the year, so far as weather permits, with a lecture on some phase of field botany when obliged to stay indoors. Notebooks required.

One hour. One afternoon of attendance. Through the year. May be elected for more than one year. Elective for all students taking work in the department who have credit for 20 or 1, 2.

21, 22. *Botanical Seminar*

A study of recent botanical literature.

Two hours. Through the year. May be elected for more than one year. Elective for all students in the department except 20; 1, 2; 18.

VI. CHEMISTRY†

ROBERT FOSTER CHAMBERS, PH.D., *Assistant Professor of Chemistry*

SAMUEL TOMLINSON ARNOLD, PH.D., *Assistant Professor of Chemistry*

HERBERT FRANKLIN DAVISON, A.M., *Assistant Professor of Chemistry*

ALBERT EDWIN DILLINGHAM, PH.B., *Instructor in Chemistry*

HENRY WEEDEN UNDERWOOD, JR., PH.D., *Research Fellow in Chemistry*

WILLIAM WALKER RUSSELL, PH.B., *Assistant in Chemistry*

FRANCIS LLOYD SIMONS, PH.B., *Assistant in Chemistry*

1, 2. *Descriptive Chemistry*§

Non-metals; metals, their metallurgy, compounds, and practical applications; theoretical chemistry. Lectures with experiments; written exercises; laboratory work. *Professor DAVISON and Mr. SIMONS.*

Three hours. Through the year. Elective for Undergraduates. *Tu., Th., Sat., at 10.20.* Laboratory fee, \$4.50 a semester. Laboratory hours to be arranged with the instructor.

† Courses 1, 2, or 51, 52; 3, 4, 7, 8, and 15, 16 are designed to give a thorough general introduction to chemistry to serve as a foundation for teaching chemistry, or for advanced study in medicine, bacteriology, botany, and chemistry. Course 9 is offered for those who intend to follow sanitary work.

§ Credit for the entrance requirement in Chemistry admits only to 51, 52, which may not be taken without previous preparation. Students who wish to enter more advanced courses while taking 51, 52 must pass a special test at the time of the entrance examination in Chemistry. This test will cover the following topics: 1. All of the non-metals with their principal compounds and the processes of manufacture of the chief commercial products from non-metals. 2. About thirty important metals, their occurrence, preparation from the ore, the preparation and uses of their chief compounds. 3. The general principles of chemical action which depend upon physical laws. 4. Methods of making chemical computations of moderate difficulty. Preparation for this test may require the equivalent of six hours a week for one school year.

51, 52. *Inorganic Chemistry*†

Professor DAVISON *and* *Mr.* SIMONS.

Three hours. Through the year. For students who presented chemistry for entrance. *Tu., Th., Sat., at 12.20.* Laboratory fee, \$4.50 a semester. Laboratory hours to be arranged with the instructor.

3, 4. *Qualitative and Quantitative Analysis*

Properties of the metallic elements; their separation from certain of their compounds. The principal non-metals and the acids formed by them; methods of separation and recognition of acids and acid radicals. Quantitative precipitations and separations of the most important elements and compounds; the principles upon which quantitative apparatus is constructed. Laboratory work; recitations in qualitative analysis and in chemical theory; exercises in stoichiometry.

Professor ARNOLD *and* *Mr.* RUSSELL.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2, or 51, 52. *Sat. at 11.20.* Laboratory fee, \$7.50 a semester.

53. *Qualitative Analysis*§

Similar to Chemistry 3, 4 in scope, but designed primarily to complete the requirements in inorganic chemistry for pre-medical students. *Professor* ARNOLD *and* *Mr.* RUSSELL.

Six hours. Twelve hours of attendance. First semester. Elective for approved students who do not intend to major in chemistry. *Mon., Wed., Fri., at 11.20.* Laboratory fee, \$15.

54. *Organic Chemistry*§

A shorter course designed to meet the needs of the pre-medical student in organic chemistry. *Professor* CHAMBERS *and* *Mr.* DILLINGHAM.

† Credit for the entrance requirement in chemistry admits only to 51, 52, which may not be taken without previous preparation. Students who wish to enter more advanced courses while taking 51, 52 must pass a special test at the time of the entrance examination in chemistry. This test will cover the following topics: 1. All of the non-metals with their principal compounds and the processes of manufacture of the chief commercial products from non-metals. 2. About thirty important metals, their occurrence, preparation from the ore, the preparation and uses of their chief compounds. 3. The general principles of chemical action which depend upon physical laws. 4. Methods of making chemical computations of moderate difficulty. Preparation for this test may require the equivalent of six hours a week for one school year.

§ Courses 53 and 54 are designed to meet the requirements for admission to medical school. They will not be accepted as prerequisites for more advanced courses.

Six hours. Nine hours of attendance. Second semester. Elective for students who have credit for Chemistry 53. *Mon., Wed., Fri., at 11.20.* Laboratory fee, \$7.50.

5, 6. *Quantitative Analysis, Advanced Course*

Acidimetry and alkalimetry; analysis of pure chemical compounds, minerals, ores, slags, alloys, limestone, iron, and steel; analysis of organic compounds; examination of agricultural products, testing of chemicals used in textile establishments, gas analysis, etc. *Professor* ARNOLD and *Mr.* RUSSELL.

Six hours. Twelve hours of attendance. Through the year. Elective for approved Juniors, Seniors, and Graduates who have credit for 3, 4. Laboratory fee, \$7.50 a semester.

7, 8. *Organic Chemistry*

Preparation and analysis of representative organic compounds. Lectures, recitations, and laboratory work. *Professor* CHAMBERS and *Mr.* DILLINGHAM.

Six hours. Through the year. Elective for approved Juniors, Seniors, and Graduates who have credit for 3, 4. *Mon., Wed., Fri., at 9.20.* Laboratory fee for course 7, \$7.50; for course 8, \$12.50.

9. *Sanitary Chemistry*

Qualitative and quantitative examination of air, water, food and food adulterants, flour, bread, milk, butter, etc. Also the analysis of sewage and effluents. Lectures, recitations, and laboratory work. *Professor* ARNOLD.

Three hours. First semester. Elective for students who have credit for 1-4 and 7, 8. Laboratory fee, \$7.50.

12. *Organic Dyes*

The chemistry and use of mordants, dyes, etc. *Mr.* DILLINGHAM.

Three hours. Six hours of attendance. Second semester. Elective for approved Seniors and Graduates. Laboratory fee, \$7.50.

[13, 14. *Industrial Chemistry*]

Lectures and laboratory work.

Three hours. Six hours of attendance. Through the year. Elective for approved Graduates. By written consent of the department this course may be elected for six or nine hours. Laboratory fee, \$7.50 per semester. Not offered in 1919-20.

15, 16. *Physical Chemistry*

Lectures and laboratory work. *Professor* ARNOLD and *Dr.* UNDERWOOD.
Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 9.20.* Laboratory fee, \$2.50 a semester.

[17, 18. *Physical Chemistry, Advanced Course*]

Lectures and laboratory work.

Three hours. Through the year. Elective for approved Graduates who have credit for Physics 1-4, and have credit for or are taking Mathematics 7, 8. Laboratory fee, \$2.50 a semester. Not offered in 1919-20.

[19. *Organic Chemistry, Advanced Course*]

Three hours. First semester. Elective for approved Graduates. Not offered in 1919-20.

[20. *Inorganic Chemistry, Advanced Course*]

Three hours. Second semester. Elective for approved Juniors, Seniors, and Graduates. Not offered in 1919-20.

21, 22. *Organic Preparations, Advanced Course*

Professor CHAMBERS and *Mr.* DILLINGHAM.

Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates who have credit for 7, 8. By written consent of the department this course may be elected for six or nine hours. Laboratory fee, \$7.50 a semester for each three hours of credit.

23, 24. *Inorganic Preparations, Advanced Course*

Professor CHAMBERS and *Mr.* DILLINGHAM.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. By written consent of the department this course may be elected for six or nine hours. Laboratory fee, \$7.50 a semester for each three hours of credit.

25, 26. *Research Work in Chemistry*

Professor CHAMBERS.

Three or more hours. Through the year. Elective for Graduates. Laboratory fee, \$7.50 a semester for each three hours of credit.

27, 28. *Conference on Special Topics in Chemistry*

Professors ARNOLD and CHAMBERS.

One hour. Through the year. Elective for approved students.

29, 30. *Industrial Chemistry and Research**Professor* ARNOLD.

Three or more hours. Through the year. Elective for approved Graduates. Laboratory fee, \$7.50 a semester for each three hours of credit.

32. *Industrial Analysis*

Analysis of commercial products. Lectures, recitations, and laboratory work. *Professor* ARNOLD.

Three hours. Second semester. Elective for students who have credit for 1-8 and 15, 16. Laboratory fee, \$7.50.

VII. ECONOMICS ‡

HENRY BRAYTON GARDNER, PH.D., *Eastman Professor of Political Economy*

FLOYD LAMAR VAUGHAN, A.M., *Assistant Professor of Economics*

ARTHUR LLOYD PHILBRICK, PH.B., *Lecturer in Economics*

WILLIAM RODERICK SHERMAN, A.M., *Instructor in Economics*

1. *Elementary Economics*

An outline and discussion of the fundamental principles of the subject. *Professors* GARDNER and VAUGHAN, *Mr.* SHERMAN.

Three hours. First semester or second semester. Students must indicate on their registration cards the semester in which they wish to take the course. Required with Social and Political Science 1 in the Sophomore, Junior, or Senior year of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy, and in the Sophomore year of candidates for the degree of Bachelor of Science. § First semester, *Tu., Th., Sat., at 10.20*. Second semester, *Mon., Wed., Fri., at 12.20*.

[3. *International Trade*] ||

The conditions which govern international trade; the principle of comparative costs; historical sketch of the development of international trade; the movement of international trade at the present time;

‡ The courses in this department other than 1 are open only to students who have credit for Economics 1 and Social and Political Science 1.

§ Students who intend to take Economics 3 or 15 will find it to their advantage to take Geology 1 and 6 as an introductory course.

§ See pages 54-62.

|| Geology 6 is recommended as a preliminary to this course.

the relation between international investment and international credit and international trade; the mercantile marine; the mechanism for handling international trade.

Three hours. First semester. Not offered in 1919-20.

5, 6. *Money and Banking*

Principles of money; recent monetary history, particularly of the United States; systems of the leading industrial nations; present problems. Principles of banking; recent banking history, particularly of the United States; the Federal Reserve system; systems of the leading industrial nations; present problems. *Professor GARDNER.*

Three hours. Through the year. *Tu., Th., Sat., at 11.20.*

7. *Problems of Labor and Industry*

An analysis of the economic and social effects of modern methods of production; the rise of the trade union and the influence of collective bargaining; the organization of industry; scientific management, profit sharing, legal minimum wage, social insurance, and other modern movements to secure industrial efficiency and a more equitable distribution of wealth. *Professor VAUGHAN.*

Three hours. First semester. *Mon., Wed., Fri., at 11.20.*

8. *Socialism and Allied Movements*

Criticism of the present industrial order; brief review of the historically important socialistic schemes; an analysis and criticism of the leading socialistic theories with special reference to present-day proposals; communism, syndicalism, and land nationalization as agencies for economic reform. *Mr. SHERMAN.*

Three hours. Second semester. *Mon., Wed., Fri., at 11.20.*

[9. *Tariff, Reciprocity, and Shipping Subsidies*]

The development of the American system of protection and its effect upon domestic industry and international commerce; an analysis and criticism of arguments for protective tariff and for free trade; reciprocity agreements; policies of leading nations with regard to state aid to shipping.

Three hours. Second semester. Not offered in 1919-20.

11, 12. *Public Finance and Financial History*

General principles of public finance; revenues and expenditures of leading industrial nations; public enterprises in their financial aspects; principal forms of taxation and their effects; public debts. Special attention will be given to the financial history of the United States from the adoption of the Constitution to the present day. *Professor GARDNER.*

Three hours. Through the year. *Tu., Th., Sat., at 12.20.*

13. *Statistics* ‡

The principles of statistics as a method of recording and presenting social and economic facts; the possibilities and limitations of the statistical method; the interpretation of statistics; some of the important results of statistical investigation. *Professor GARDNER.*

Three hours. First semester. Hours to be arranged.

15. *Trade and Transportation in the United States*

General history of the industrial development of the United States with special reference to the geographical distribution of industries and the development of means of transportation; the determination of transportation rates and the public control of transportation agencies; the development of the marketing mechanism. *Professor VAUGHAN.*

Three hours. Second semester. *Mon., Wed., Fri., at 10.20.*

16. *Corporations, Corporation Finance, and Combinations*

The corporation as a form of business organization; kinds of securities; capitalization; promotion; underwriting; stock market; financial management; and reorganization. The development of combinations and trusts; state and federal control; and similar topics. *Professor VAUGHAN.*

Three hours. First semester. *Mon., Wed., Fri., at 10.20.*

17, 18. *Accounting*

The importance of accounting in commerce and industry; the principles of recording business transactions and values as applied to firms,

‡ The Department of Mathematics offers a course (54) in the mathematical theory of statistics in the second semester.

private and public service corporations, and fiduciaries; cost accounts and the interpretation of financial statements. *Mr. PHILBRICK.*

Three hours. Through the year. *Mon., Wed., Fri., at 8.*

19, 20. *Accounting*

A continuation of Economics 17, 18, involving a study of the practical application of accounts, the reading of balance sheets, analysis of corporation reports, and preparation of financial statements based on books of account. The specialties of the subject, such as costs, auditing, fiduciary accounts, municipal and railroad accounts, also will be studied. *Mr. PHILBRICK.*

Three hours. Through the year. *Tu., Th., Sat., at 8.*

26. *Marketing*

Organization of the market and the system of distribution; merchandising methods of manufacturers; typical business organization; selling problems of retailers; advertising and related topics. *Professor VAUGHAN.*

Three hours. Second semester. *Tu., Th., Sat., at 9.20.*

VIII. EDUCATION†

WALTER BALLOU JACOBS, A.M., *Professor of Education, Director of University Extension*

STEPHEN SHELDON COLVIN, PH.D., *Professor of Educational Psychology, Director of the School of Education*

CLAUS EMANUEL EKSTROM, A.M., *Instructor in Education*

2. *Principles of Education, an Introductory Course*

The meaning and scope of education; its function as a social institution; a comprehensive view of the problems of education as they appear to-day and an evaluation of the solutions offered. *Professor JACOBS.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 11.20.*

† Those who intend to teach are advised to elect courses 2 and 4 during the Junior year.

Courses 1-4 cover the usual requirements for Certificates of the First Grade except where practice teaching or experience is demanded. In Rhode Island a certificate is required of all teachers in schools supported in whole or in part by public money. Certificates of the First Grade are granted without further examination to those who have completed courses 1-4 and 21, and hold a college degree. Due credit toward the certificate is also given for separate courses.

For further explanation of the work of this department, see pages 167, 168.

4. *Methods of Teaching*

Organized observation of teaching; lesson-planning; the art of questioning; the use of books in teaching; teaching how to study, how to acquire skill, how to think, how to acquire capacity for enjoyment, how to retain what has been learned; management of classes; measuring the results of teaching; qualities which make the successful teacher. *Professor JACOBS.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 11.20.*

3. *Educational Psychology*

A study of the inherited nature of man, the general principles of learning, the psychology of individual differences, and mental tests and measurements. *Mr. EKSTROM.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.20.*

1. *History of Education*

A study of the educational problems of the present; and an explanation of the present through the history of the past. *Mr. EKSTROM.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.20.*

21. *Administration of Education in Rhode Island*

A study of education as an institution of society and the state; Rhode Island as a type; a survey of all educational activities as they exist at the present time, private, parochial, and public; their origins in social movements; their mode of administration, particularly the administration of public education as embodied in the laws of the state and nation. The origin, history, and function of Brown University will have an important place.

Three hours. First semester. Two hours of attendance. Elective for Seniors and Graduates, and for experienced teachers, *Mon., 4 to 6.*

22. *Administration of Education: School Administration*

Control and supervision: boards of education, the superintendent of schools. Types of schools and their organization: types of grading. The teaching force: training, appointment, promotion, salaries, pensions. The pupil: attendance, promotion, retardation, elimination, the course of study. The measurement of educational results: by marks,

by comparisons, by standards and scales. The cost of education: sources of revenue, apportionment of funds. *Professor JACOBS.*

Three hours. Second semester. Two hours of attendance. Elective for Seniors and Graduates, and for experienced teachers. *Mon., 4 to 6.*

5. *Secondary Education, Organization and Function*

The place of the high school and academy in the American system of education; the administration of secondary education; its relation to the colleges and universities; meaning and value of the various secondary school studies, and their organization into a curriculum; the social life of the high school and academy; athletics in secondary schools; the reorganization of secondary education; the junior high school. *Professor JACOBS.*

Three hours. Two hours of attendance. First semester. Elective for Graduates and experienced teachers, and for approved Seniors. *Wed., 3.20 to 5.20.*

6. *Secondary Education, Methods and Processes*

Methods of teaching in secondary schools; the resources at the command of the teacher; the selection of subject-matter. The following receive special attention as typical secondary school studies: English, Modern Languages, and Latin; History and Civics, Science, and Mathematics; the Manual Arts; Vocational Studies. *Professor JACOBS.*

Three hours. Two hours of attendance. Second semester. Elective for Graduates and experienced teachers, and for approved Seniors. *Wed., 3.20 to 5.20.*

7, 8. *Problems in Practical Teaching, Secondary Schools*

Practice teaching in the high schools of Providence and of neighboring cities and towns. Observation, reports, and conferences. Designed for those who wish to become instructors in colleges, teachers or principals in secondary schools, or superintendents of schools. The course is given with the assistance of Supervising Teachers. *Mr. EKSTROM.*

Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and are taking 5, 6, and 15, 16. *Sat. at 9, and at other hours to be arranged.*

9, 10. *Problems in Practical Teaching, Grammar Grades*

Practice teaching in the Providence Grammar Schools. Observation, reports, and conferences. Designed especially for those who wish to become grade teachers, principals of grammar schools, or superintendents of schools, but also for those who wish to teach in secondary

schools. The following studies receive special attention: Arithmetic, Language, History, and Geography. *Mr. EKSTROM.*

Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and are taking 15, 16, and for approved Seniors. *Mon. at 3, and at other hours to be arranged.*

11, 12. *Experimental Education*

A course in educational psychology designed to meet the needs of students who have already some familiarity with general psychology and with elementary educational psychology. Particular emphasis will be placed on the psychology of learning, and on mental tests and measurements. Under guidance the student will undertake simple investigations in some phase of experimental education, report on his results, and finally set them forth in written form. *Professor COLVIN.* Three hours. Through the year. Elective for Graduates and experienced teachers. *Th., 4 to 6.*

15, 16. *Seminary in Education*

Studies in current educational problems. The seminary is conducted in two parts in successive hours. Part A: reviews of the latest books upon education and related subjects, and studies of special problems assigned to individual students for investigation and experiment. Part B: a more intensive study of certain problems of current interest. For 1919-20 the subjects are: First semester: Public Education in the United States. Second semester: Educational Sociology. As subjects are not repeated, the course may be elected for two or more years. *Professor JACOBS.*

Three hours. Two hours of attendance. Through the year. Required of student-teachers. Elective for Graduates and experienced teachers, and for approved Seniors. *Sat., 10.20 to 12.20.*

19, 20. *Experimental Education, Research Course*

Designed for those engaged in major problems of investigation in educational psychology. *Professor COLVIN.*

Three hours. Through the year. Attendance by appointment. Elective for Graduates who have credit for 11, 12.

23, 24. *Elementary Education*

A course in the organization, administration, and methods of elementary education. The work of the first semester will stress the use

of educational tests and measurements. In the second semester particular emphasis will be placed upon the Junior High School. The course is designed primarily to meet the needs of superintendents, principals, supervisors, and experienced teachers. *Mr. EKSTROM.*

Three hours. Two hours of attendance. Through the year. Elective for Graduates and experienced teachers. *Th., 4 to 6.*

IX. ENGINEERING

JOHN EDWARD HILL, C.E.M., Sc.D., *Professor of Civil Engineering*
WILLIAM HERBERT KENERSON, M.E., A.M., Sc.D., *Professor of Mechanical Engineering, Executive Secretary of the Division of Engineering*

ANSEL BROOKS, Ph.B., M.E., *Associate Professor of Mechanics and Mechanical Drawing*

ARTHUR EUGENE WATSON, Ph.D., *Assistant Professor of Electrical Engineering*

JAMES ALEXANDER HALL, A.B., Sc.B., *Assistant Professor of Mechanical Engineering*

SYDNEY WILMOT, Sc.B., A.M., *Assistant Professor of Civil Engineering*

FREDERICK NEAL TOMPKINS, Sc.B., *Instructor in Electrical Engineering*

ALTON CHARLES CHICK, Sc.B., *Instructor in Mechanical Engineering*

EUGENE WILLIAM O'BRIEN, Sc.B., *Instructor in Mechanics and Mechanical Drawing*

CHARLES FRANCIS CHASE, *Assistant in Surveying*

ARTHUR JEREMIAH LATHAM, Sc.B., *Assistant in Surveying*

1. *Elements of Engineering—Surveying*

Theory and practice of plane surveying: use of the tape, compass, level, and transit. *Professor HILL and assistants.*

Three hours. Six hours of attendance. First semester: Lectures, recitations, field work, and drafting. Elective for students who are taking or have taken trigonometry. *Mon., Wed., Fri., 8 and 9.20.*

2. *Elements of Engineering—Mechanics*

Statics, including resolution and composition of forces, centre of gravity, friction, kinetics through rectilinear motion and rotation; work, power, and energy. *Professors HALL and HILL, Mr. O'BRIEN.*

Three hours. Six hours of attendance. Second semester: Lectures, recitations, drafting, and laboratory work. Elective for students who have credit for trigonometry. *Mon., Wed., Fri., 8 and 9.20.*

3. *Engineering Drawing*

Use of drafting instruments, lettering, tracing, third quadrant projection, detailing and dimensioning of machine parts. *Professor BROOKS and Mr. O'BRIEN.*

Three hours. Six hours of drawing and one hour of recitation. First semester: Drafting-room work and assigned reading. Elective for Undergraduates. *1st division, Mon., Wed., Fri., 10.20 to 12.10; 2d division, Mon., Th., 2 to 5.*

5. *Surveying*

A continuation of 1. Use of the tape, level, transit, stadia, and plane table; triangulation, topography, and railroad curves. *Professor WILMOT and assistants.*

Summer course: Three weeks, five and one-half days per week. Credit, three semester hours. Lectures, recitations, field work, and drafting. Elective for students who have credit for 1.

6. *Shop Work*

Pattern making and machine shop practice. *Messrs. HADLEY and —.*

Summer course: Three weeks, five and one-half days per week. Credit, three semester hours.

7, 8. *Applied Mechanics*

Continuation of 2. Completion of statics; moment of inertia; curvilinear motion; combined rotation and translation; impulse and momentum. Strength of materials, including tension, compression, shearing, torsion, and flexure; theory of beams. *Professors HALL and BROOKS, Mr. O'BRIEN.*

Three hours. Through the year. Elective for students who have credit for 2 and are taking or have credit for Calculus. *Tu., Th., Sat., at 9.20.*

9, 10. *Theory of Structures*

The fundamental course in civil engineering required of all engineering students. The principles of structural design in steel, masonry, reinforced concrete, and timber for both substructure and superstructure. Practice in reading and preparing structural drawings. While the work is primarily theoretical, practice and its relation to theory are emphasized. *Professor WILMOT.*

Four hours. Through the year. Lectures, recitations, and drafting. Elective for students who have credit for 8. *Mon., Tu., Th., Sat., at 9.20.*

11, 12. *Elementary Electrical Engineering*

The fundamental course in electrical engineering required of all engineering students. Principles of electricity and magnetism as applied to dynamo-electric machinery. Methods of generating and utilizing direct and alternating currents. Characteristics of generators and motors. *Professor WATSON and Mr. TOMPKINS.*

Three hours. Two hours of recitation and lectures, and two hours of laboratory practice. Through the year. Elective for those who have credit for Physics 1, 2, or 27, 28, and Mathematics 6. *Wed., Fri., at 9.20.*

13, 14. *Heat and Power*

The fundamental course in mechanical engineering required of all engineering students; application of the principles of gases and vapors to steam, gas, and other heat engines, air compressors, refrigerating apparatus, etc.; the energy of fuel and its utilization for development of power; combination of units into the power plant. *Professor KENERSON and Mr. CHICK.*

Three hours. Lectures, recitations, and laboratory work. Through the year. Elective for students who have credit for Physics 1, 2. *Mon., Wed., Fri., at 10.20.*

15. *Materials of Engineering*

Study of the properties of the various materials used in engineering, such as cast iron, steel, bronzes, wood, cement, concrete, brick, and stone. *Professor KENERSON and Mr. CHICK.*

Three hours. Lectures, recitations, and laboratory work. First semester. Elective for students who have credit for 8. *Tu., Th., Sat., at 11.20.*

16. *Hydraulics*

Hydrostatics; nature and use of instruments, flow through orifices, over weirs, through tubes, through pipes, in conduits; flow of rivers, dynamics of water; theoretical consideration of water wheels, and pumping machinery. *Professors BROOKS and WILMOT.*

Three hours. Lectures, recitations, and laboratory work. Second semester. Elective for students who have credit for 7. *Tu., Th., Sat., at 11.20.*

[17, 18. *Engineering Economics*]

Not offered in 1919-20.

A. CIVIL ENGINEERING

18. *Surveying*

Designed to give electrical and mechanical engineering students the fundamental principles employed in the use of the tape, transit, and level. *Professor HILL and assistants.*

One hour. Second semester. Not elective. *Fri., 2 to 5.*

26. *Engineering Law and Practice*

Contracts and contracting, business law and relations in general, riparian law, patents, cost systems, organization and management, and kindred topics. The course aims to outline the broader professional activities of the engineer and to indicate his relations to the public and to other professional men, but opportunity is afforded for specialization. *Professor ———.*

One hour. Two hours of attendance. Second semester. Elective for Juniors and Seniors. *Tu., Th., at 9.20.*

[27, 28. *Structural Design*]

Design and construction of foundations, buildings, bridges, dams, arches, retaining walls, and similar structures; preparation and study of strain sheets and working drawings. Inspection trips.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 10. Not offered in 1919-20.

[29, 30. *Structural Design*]

Supplements courses listed above by giving the student a knowledge of important literature and of principles and methods not readily acquired in practice. Discussion of special problems in advanced branches of the subject.

Three hours. Through the year. Elective for students who are taking or have credit for 27, 28. Not offered in 1919-20.

[31, 32. *Construction in Steel and Concrete*]

Primarily for those who will become purchasers rather than designers of engineering structures. Principles and methods of design are explained, and the process of construction is outlined from foundation to completed structure, the function of each worker from laborer to purchaser being indicated. Practice in reading and preparing structural drawings.

Three hours. Through the year. Elective for students who have credit for 8. Not offered in 1919-20.

[33, 34. *Hydraulic and Sanitary Engineering*]

Water supply and sewerage from a sanitary and an engineering standpoint. The first semester is devoted mainly to the chemical, biological, and meteorologic aspects of the subject, and the second semester to engineering construction and design. Inspection trips.

Three hours. Through the year. Elective for students who have credit for or are taking 27, 28. Not offered in 1919-20.

34. *Hydraulic Surveying (Applied Hydraulics)*

Methods of surveying applicable to river and harbor work; methods of measuring and rating the flow of streams; actual measurement of the discharge of a stream by means of the current meter, weir, and floats. Recitations and field work. *Professor WILMOT.*

One hour. Three hours of recitation or eight hours of field work. Last third of second semester. Elective for students who have credit for 5 and Mechanics 3. *Mon., Wed., Fri., at 11.20.*

37, 38. *Theory of Structures*

Extends the work of 14. The essentials of design in steel, masonry, and timber, for both substructure and superstructure. While the work is primarily theoretical, practice and its relations to theory are emphasized. In the second semester special attention is given to reinforced concrete. *Professor WILMOT.*

Three hours. Through the year. Elective for students who have credit for 14.

40. *Structural Design*

Design of foundations, buildings, bridges, dams, arches, retaining walls, and similar structures; preparation and study of strain sheets and working drawings. Individual problems are given and results are from time to time discussed with the class. *Professor WILMOT.*

Three hours. Six hours of drafting. Second semester. Elective for students who have credit for or are taking 38. *Tu., Th., Sat., at 8.*

42. *Advanced Structural Design*

Supplements courses listed above by giving the student a knowledge of important literature, and of principles and methods not readily

acquired in practice. Discussion of special problems in advanced branches of the science. *Professor WILMOT.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for or are taking 38 and 40. *Tu., 11.20 to 1.20; 2 to 6.*

43, [44]. *Construction in Steel and Concrete*

Primarily for those who will become purchasers rather than designers of engineering structures. Principles and methods of design are explained and the process of construction is outlined from foundation to completed structure, the functions of each worker from laborer to purchaser being indicated. Practice in reading and preparing structural drawings. *Professor WILMOT.*

Three hours. Through the year. Elective for students who have credit for Mechanics 1. First semester, *Mon. at 10.20; Tu., Th., at 12.20.* Course 44 not offered in 1919-20.

45, 46. *Water Supply and Sewerage*

Water supply and sewerage from a sanitary and an engineering standpoint. The first semester is devoted mainly to the chemical, biological, and descriptive aspects of the subjects, and the second semester to engineering construction and design. *Professor HILL.*

Four hours and three hours. Through the year. Course 45 is elective for Seniors. Course 46 is elective for students who have credit for Mechanics 3 and Civil Engineering 14. First semester, *Tu., Th., at 9.20; Mon., Fri., at 12.20.* Second semester, *Tu., 11.20 to 1.20; Mon., 2 to 6.*

51, 52. *Highway Engineering*

Economics, construction and design of roads and pavements. Methods of testing road materials. Systems of administration and maintenance. *Professor WILMOT.*

Three hours. Through the year. Elective for students who have credit for 5, 7, 8.

47, 48. *Railroad Engineering*

Theory, location, construction, and economics of railroad engineering. *Professor HILL.*

Three hours. Through the year. Lectures, recitations, field work, and drafting. Elective for students who have credit for 5, 7, 8. Hours to be arranged.

[49, 50. *Special Investigations*]

One hour. Through the year. Not offered in 1919-20.

36. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Civil Engineering unless a substitute is allowed by the head of the department. The thesis must embody a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

B. ELECTRICAL ENGINEERING

9. *Theory of Alternating Currents*

A mathematical and graphical treatment of circuits containing resistance, inductance, and capacity. Principles of alternating current machinery. *Professor WATSON.*

Four hours. Three hours of recitation and two hours of laboratory work. First semester. Elective for students who have credit for 2 and Mathematics 20. *Tu. at 10.20; Th., 9.20 to 11.20.* Laboratory fee, \$2.50.

10. *Alternating Current Apparatus*

Methods of generating and utilizing alternating currents; characteristics of generators, motors, converters, and transformers. *Professor WATSON.*

Four hours. Three hours of recitation and two hours of laboratory work. Second semester. Elective for students who have credit for 2. *Mon., Wed., Fri., at 10.20.* Laboratory fee, \$2.50.

14. *Alternating Current Machine Design*

Calculation and design of generators, motors, transformers, and auxiliary apparatus. *Mr. TOMPKINS.*

Three hours. Second semester. Elective for students who have credit for 9. *Mon., Tu., Th., at 10.20.*

16. *Traction and Transmission Engineering*

Electric railway systems and equipment; theory and design of high tension transmission lines and low tension net-works. *Professor WATSON.*

Two hours. Second semester. Elective for students who have credit for 11. *Mon., Th., at 11.20.*

17, 18. *Seminary in Electrical Engineering*

Reading and discussion of current technical literature.

One hour. Through the year. Elective for students who have credit for 2. *Sat.* at 10.20.

19, 20. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Electrical Engineering except those who, by permission of the department, are allowed to substitute a regular three-hour course for one semester in some other department. The thesis must embody a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

51. *Telegraph and Telephone Engineering*

Descriptive course in wire telegraph and telephone apparatus and systems, including laboratory practice in assembling and operating illustrative apparatus. *Professor WATSON and Mr. TOMPKINS.*

Three hours. Two hours of recitation and two hours of laboratory work or trips of inspection. First semester. Elective for those who are taking or have taken 11. *Mon., Fri., at 10.20.*

52. *Direct Current Machine Design*

Calculation and design of generators, motors, and auxiliary apparatus, accompanied with assignments of reading in the history and development of electrical engineering. *Mr. TOMPKINS.*

Three hours. Six hours of attendance. Second semester. Elective for those who have credit for 11. *Tu., Th., Sat., at 10.20.*

[53, 54. *Alternating Current Apparatus and Systems*]

A continuation of 9 and 10. A detailed study of generators, motors, converters, transformers, and allied auxiliary apparatus.

Three hours. Through the year. Two hours of recitation and lecture, two hours of laboratory practice. Elective for those who have credit for 12. Not offered in 1919-20.

[56. *Alternating Current Machine Design*]

Calculation and design of generators, motors, transformers, and auxiliary apparatus.

Three hours. Six hours of attendance. Second semester. Elective for those who have credit for 53. Not offered in 1919-20.

[58. *Traction and Transmission Systems*]

Electric railway apparatus, central and sub-station equipments for general service; high tension transmission lines and low tension networks.

Three hours. Second semester. Elective for those who have credit for 11. Not offered in 1919-20.

[60. *Commercial Metering and Measurements*]

A technical course for advanced or special students for giving more detailed study and practice with a considerable range of electrical measuring instruments, including their calibration, with reference to either primary or secondary standards.

Three hours. Second semester. One hour of lecture or recitation, assignments of reading to count for one hour, and one hour of laboratory practice. Not offered in 1919-20.

61, 62. *Radio Telegraphy*

General theory: practice with laboratory apparatus and in use of the code. Radio measurements in connection with the Department of Physics.

Three hours. First or second semester. Elective for Juniors or Seniors.

C. MECHANICAL ENGINEERING

11, 12. *Machine Design*

Application of the principles of previous engineering courses to the design of representative types of machines. First semester: gas engine design. Second semester: selected problems. *Professor HALL.*

Three hours. Six hours of attendance. Through the year. *Tu., Th., Sat., 10.20 to 12.20.* Elective for students who have credit for 10.

14. *Power Plant Engineering*

Discussion of the relation and coördination of the various parts of the complete power plant; management, and methods of determining efficiency; selection of the best equipment from manufacturers' catalogues and actual inspection. Lectures, recitations, tests, and inspection trips. *Professor HALL.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 15, 16. *Fri., 2 to 5; Tu., Th., Sat., at 8.*

19, 20. *Materials of Engineering*

Study of the sources, manufacture, and properties of the important materials used in engineering; laboratory tests to determine the behavior of materials when subjected to tensile, compressive, and torsional stresses; mixing and testing of cements and concretes; preparation and examination of sections for the microscopical study of the structure of metals and alloys. Lectures, recitations, and laboratory work. *Professor KENERSON.*

Three hours. Through the year. Elective for students who have credit for or are taking Mechanics 1. *Tu., Th., at 11.20*, and a two-hour laboratory period.

22. *Advanced Seminary and Laboratory Course*

Discussion of general engineering problems, laboratory investigations, inspection trips, reports, and conferences. *Professors KENERSON and HALL.*

Three hours. Second semester. *Mon., Th., 2 to 5.*

24. *Applied Hydraulics*

Laboratory experiments in connection with Mechanics 4. *Professor BROOKS.*

One hour. Second semester. Must be taken with Mechanics 4.

25, 26. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Mechanical Engineering. The thesis must embody a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

75, 76. *Mechanism and Machine Design*

First semester: general course in mechanism, including velocity ratios, linkages, straight line motions, intermittent motion, cams, gear trains, and gear tooth curves. Second semester: introductory course in machine design, including joints and connections, machine frames, journals and bearings, power transmission, balancing, etc. Lectures, recitations, problems, and drafting-room work. *Professor HALL.*

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 7, 8. *Mon., Wed., Fri., at 11.20; Tu., 2 to 5.*

[77, 78. *Advanced Machine Design*]

Application of the principles of mechanism and machine design to specific problems, balancing of moving parts. Internal combustion engine design.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 75, 76. Not offered in 1919-20.

79, 80. *Experimental Engineering*]

Laboratory exercises on boilers, steam engines, internal combustion engines, turbines, air compressors, transmission machinery, etc., special investigations, special emphasis laid on the form of the reports. Recitations, laboratory work, and written reports.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 13, 14. Not offered in 1919-20.

[81. *Special Problems in Mechanical Engineering*]

Discussion of group of subjects entering into mechanical engineering work, including heating and ventilation, refrigeration, air compression, fire prevention, and safety engineering.

Not offered in 1919-20.

[82. *Power Plant Engineering*]

Discussion of the condition of best economy in power plant and selection of proper apparatus. Lectures, recitations, problems, and trips.

Not offered in 1919-20.

[83. *Manufacturing Methods*]

Not offered in 1919-20.

D. MECHANICS

3. *Mechanics of Fluids*

Hydrostatics; nature and use of instruments; flow through orifices, over weirs, through tubes, through pipes, in conduits; flow of rivers; water supply, and water power. *Professors* BROOKS and WILMOT.

Three hours. First semester. Required of candidates for the degree of Bachelor of Science. Elective for students who have credit for 1, 2. *Mon., Wed., Fri., at 11.20.*

X. ENGLISH ‡

WALTER COCHRANE BRONSON, A.M., LITT.D., *Professor of English*

LINDSAY TODD DAMON, A.B., *Professor of English*

ALBERT KNIGHT POTTER, A.M., *Professor of English*

GEORGE WYLLYS BENEDICT, PH.D., *Associate Professor of English*

THOMAS CROSBY, JR., A.M., *Associate Professor of English and Public Speaking*

HENRY BARRETT HUNTINGTON, A.B., *Associate Professor of English*

WILLIAM THOMSON HASTINGS, A.M., *Assistant Professor of English*

KENNETH OLIVER MASON, A.M., *Instructor in English*

RAYMOND ABNER PRESTON, A.M., *Instructor in English*

HAROLD IRVING LONG, A.M., *Instructor in English*

HOWARD FRANKLIN SHAWCROSS, PH.B., *Assistant in English*

JOSEPH BUTTERWORTH, JR., A.B., *Assistant in English*

SIDNEY RUSSELL GAIR, PH.B., *Assistant in English*

1. *Rhetoric and Composition*

Designed primarily to teach clear and correct expression. Training in the fundamentals of prose composition. Lectures, recitations, and themes. *Professors* BENEDICT and HASTINGS, *Messrs.* MASON, PRESTON, and LONG.

Three hours. First semester. Required of Freshmen. *1st, 2d, and 3d divisions, Mon., Wed., Fri., at 11.20; 4th, 5th, and 6th divisions, Tu., Th., Sat., at 11.20; 7th, 8th, and 9th divisions, Mon., Wed., Fri., at 12.20; 10th division, Tu., Th., Sat., at 12.20.*

1 R. *Rhetoric and Composition*

A repetition of 1. Lectures, recitations, and themes. *Mr.* PRESTON.

Three hours. Second semester. Required of students who have failed in 1. *Tu., Th., Sat., at 12.20.*

‡ Credit for 1 or 2 is a prerequisite for admission to all other courses in the department except 48 and 50.

Students electing 3, 4 may substitute 3 for 2 if they have received at least the grade of C in 1. Students taking 7, 8 in the Sophomore year may omit 2 and take 3 in the Junior year, if they have received at least the grade of C in 1.

Courses 1-16 may not be counted in fulfillment of the requirement of a year in English Literature.

48. *English Literature from the Beginning to 1700* ‡

An outline course in the history of English literature to the end of the seventeenth century, with reading and study of the greater writers. Three hours. Second semester. *1st division, Mon., Wed., Fri., at 11.20; 2d division, Tu., Th., Sat., at 11.20; 3d division, Mon., Wed., Fri., at 12.20.*

50. *Introduction to the Study of Literature* ‡

Intended to cultivate the appreciation of literature by the reading and study of famous essays, novels, plays, and poems.

Three hours. Second semester. *1st division, Mon., Wed., Fri., at 11.20; 2d division, Tu., Th., Sat., at 11.20; 3d division, Mon., Wed., Fri., at 12.20.*

2. *Rhetoric and Composition* §

A continuation of 1. Designed primarily to give training in the method, structure, and style of the chief forms of prose composition. Lectures, recitations, and themes. *Professors BENEDICT and HASTINGS, Messrs. MASON, PRESTON, and LONG.*

Three hours. Second semester. Required of Sophomores. § *1st and 2d divisions, Mon., Wed., Fri., at 11.20; 3d, 4th, and 5th divisions, Tu., Th., Sat., at 11.20; 6th and 7th divisions, Mon., Wed., Fri., at 12.20.*

49. *English Literature from 1700 to 1900* ||

An outline course in the history of English literature of the eighteenth and nineteenth centuries, with reading and study of the greater writers. *Professors BRONSON, DAMON, POTTER, and HASTINGS, Mr. MASON.*

Three hours. First semester. *1st and 4th divisions, Mon., Wed., Fri., at 11.20; 2d and 5th divisions, Tu., Th., Sat., at 11.20; 3d division, Mon., Wed., Fri., at 12.20.*

35. *English Literature from 1798 to 1832, Poetry* ||

The reaction from classicism; the influence of the French Revolution; liberalism and individualism in English poetry; contemporary

‡ Freshmen are required to take either 48 or 50. Those who have had a high school course in the history of English Literature are advised to take 50; others are advised to take 48.

§ Candidates for the degree of Bachelor of Science who take an approved substitute for English in the Sophomore year must take English 2 in the Freshman year in place of English 48 or 50. See page 62.

|| Sophomores are required to take either 49 or 35. Those who have had a high school course in the history of English Literature are advised to take 35; others are advised to take 49.

criticism. Wordsworth, Coleridge, Southey, Scott, Byron, Shelley, Keats, Landor. *Professors* BRONSON and HUNTINGTON.

Three hours. First semester. Elective for students who have credit for a semester's work in English Literature. *1st division, Mon., Wed., Fri., at 11.20; 2d division, Tu., Th., Sat., at 11.20.* Not to be offered in 1920-21.

36. *English Literature from 1798 to 1832, Prose*

The development of the romantic novel; the rise of the reviews and quarterlies; essays and miscellaneous prose. Scott, Jane Austen, Coleridge, Jeffrey, De Quincey, Lamb, Hazlitt. *Professor* BRONSON.

Three hours. Two or three hours of attendance. Second semester. Elective for students who have credit for a semester's work in English Literature. *Mon., Wed., Fri., at 11.20.* Not to be offered in 1920-21.

[3, 4. *English Composition, Second Course*]

Intended to supplement the training given in 1, 2 and to develop the power of exact and lucid statement. Lectures, conferences, and prescribed reading; weekly themes, affording exercise in various plainer kinds of prose writing.

Three hours. Through the year. Elective for Sophomores and Juniors. Not offered in 1919-20.

5, 6. *English Composition, Advanced Course*

Intended to develop ease of style and clarity and vigor of thought. Frequent practice in composition and criticism. *Professor* BENEDICT.

Three hours. Through the year. Elective for a limited number of Juniors and Seniors. With the consent of the instructor the course may be repeated. *Mon., Wed., Fri., at 10.20.*

7, 8. *Argumentative Composition*

Intended to develop the power of handling argumentative topics cogently and persuasively. Lectures on the principles and forms of argumentative composition; frequent practice in brief-drawing and the writing of forensics and less formal arguments. *Professors* HUNTINGTON and HASTINGS.

Three hours. Through the year. Required in the Sophomore year of candidates for the degree of Bachelor of Philosophy who have not taken mathematics in the Freshman year. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 10.20.*

10. *Debate*

Intended to train students in correct and vigorous oral presentation of ideas. *Professor HUNTINGTON, with the coöperation of the Professors of Economics, Social and Political Science, History, and Public Speaking.* Three hours. Second semester. Elective for a limited number of Juniors and Seniors who have credit for 7. With the consent of the instructor the course may be repeated. *Tu., Th., 2 to 4.*

11, 12. *Public Speaking*

Principles of voice culture; vocal interpretation of literature; extempore speaking. *Professor CROSBY.*

Three hours. Through the year. Elective for Sophomores and Juniors. *Mon., Wed., Fri., at 11.20.*

[13, 14. *Public Speaking, Advanced Course*]

Practice in reading lyric, narrative, and dramatic literature, in extempore speaking, and in the composition and delivery of the common forms of the occasional address. Special attention given to securing right tone-production and to improvement in speech.

Three hours. Through the year. Elective for students who have received the grade of *A* or *B* in 11, 12. Not offered in 1919-20.

[15, 16. *Old English*]

Essentials of Anglo-Saxon grammar; prose selections; *Béowulf*.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1919-20.

17, 18. *Chaucer*

Reading of most of Chaucer's works; discussion of the chief types of medieval literature; study of Middle English grammar, with some attention to the development of Modern English. *Professor POTTER.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 9.20.*

21, 22. *The Drama in England to 1642*

The drama as a literary type and its history in England to the closing of the theatres. *Professor POTTER.*

Three hours. Two or three hours of attendance. Through the year. Elective for students who have credit for a year's work in English Literature. *Mon., 2 to 4.* Not to be offered in 1920-21.

23, 24. *The Modern English Drama*

The history of the English drama from 1660 to the present time. Reading and discussion of the work of the chief playwrights from Wycherley and Congreve to Jones, Pinero, and Shaw. *Professor CROSBY.*

Three hours. Through the year. Elective for students who have credit for a year's work in English Literature. *Mon., Wed., Fri., at 12.20.* Not to be offered in 1920-21.

[25, 26. *Shakspeare*]

Careful study of a few plays, with special attention to exact interpretation.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1919-20.

27, 28. *Shakspeare*

A brief survey of the drama before Shakspeare; Shakspeare as playwright and poet. Reading of all the plays; careful study of the great tragedies. Lectures, discussions, and reports on assigned topics. *Professor DAMON.*

Three hours. Through the year. Elective for students who have credit for a year's work in English Literature. *Mon., Wed., Fri., at 12.20.*

29. *English Literature, exclusive of the Drama, from 1558 to 1603*

Elizabethan verse and prose in their relation to the great movements of the age, with special attention to Spenser and Bacon. *Professor BRONSON.*

Three hours. Two or three hours of attendance. First semester. Elective for students who have credit for a year's work in English Literature. *Tu., 2 to 4.* Not to be offered in 1920-21.

30. *English Literature, exclusive of the Drama, from 1603 to 1660*

Puritanism in literature; the Cavalier lyrists; the great prose writers; all the English poems and the more important prose works of Milton. *Professor BRONSON.*

Three hours. Two or three hours of attendance. Second semester. Elective for students who have credit for a year's work in English Literature. *Tu., 2 to 4.* Not to be offered in 1920-21.

33, 34. *The English Novel*

The history of the English novel from 1700 to 1900; reading and discussion of the greater English novelists, including Defoe, Rich-

ardson, Fielding, Smollett, Scott, Jane Austen, Dickens, Thackeray, Charlotte Brontë, George Eliot, Meredith, Hardy, Stevenson. *Professor* DAMON.

Three hours. Two or three hours of attendance. Through the year. Elective for students who have credit for a year's work in English Literature. *Mon., Wed., Fri., at 9.20.* Not to be offered in 1920-21.

[37. *English Literature from 1832 to 1892, Prose*]

Modifications of romanticism; realism; the influence of science and democracy; tendencies at the end of the century. Essays, history, miscellaneous prose, the novel. Macaulay, Carlyle, Ruskin, Arnold, Pater, Huxley, Dickens, Thackeray, Charlotte Brontë, George Eliot, Meredith, Hardy.

Three hours. Two or three hours of attendance. First semester. Elective for students who have credit for a semester's work in English Literature. Not offered in 1919-20.

[38. *English Literature from 1832 to 1892, Poetry*]

Modifications of romanticism; the influence of science and democracy; tendencies at the end of the century. Tennyson, Browning, Arnold, Clough, Rossetti, Morris, Swinburne.

Three hours. Two or three hours of attendance. Second semester. Elective for students who have credit for a semester's work in English Literature. Not offered in 1919-20.

[39, 40. *American Literature*]

American literature from the beginning to 1900, in its relation to American life and to English literature. A rapid survey of the literature of the seventeenth and eighteenth centuries; reading and study of the writers of the nineteenth century, with special attention to Irving, Cooper, Bryant, Poe, Longfellow, Emerson, Hawthorne, Whittier, Holmes, Lowell, Whitman.

Three hours. Two or three hours of attendance. Through the year. Elective for students who have credit for a year's work in English Literature. Not offered in 1919-20.

43, 44. *Seminary in English*

English stories of the Middle Ages: romances and ballads, their sources, development, and relations. *Professor* BENEDICT.

Three hours. Two hours of attendance. Through the year. Elective for Graduates and for Seniors who have received *A* or *B* in two years' work in English Literature. *Fri.*, 2 to 4.

XI. GEOLOGY

CHARLES WILSON BROWN, A.M., *Associate Professor of Geology*

RICHARD MONTGOMERY FIELD, PH.D., *Assistant Professor of Geology*

1. *Elementary Physical Geology* ‡

An introductory course in the interpretation of geological evidence. The origin of the earth; its land forms, materials, and structure, and the agencies concerned in their production. *Professors BROWN and FIELD, Mr. CHESLEY.*

Three hours. First semester. Elective for Undergraduates. *Mon., Wed., Fri.*, at 10.20. Laboratory fee, \$1.50.

6. *Principles of Economic Geography*

A study of the environmental factors—such as the physiography, the meteorology and climate, soils, and the geographic distribution of natural resources—that influence the utilization and the economic and political development of a region in the location and development of transportation routes and commerce, agriculture, forestry, manufacturing, and other industries, and affect racial and political boundaries. *Professor BROWN.*

Three hours. Second semester. Elective for Undergraduates. *Mon., Wed., Fri.*, at 10.20.

4. *Advanced Structural and Dynamical Geology*

A study of the origin and development of the structural features of the earth's crust in connection with mountain-building, folding, faulting and vulcanism. *Professors BROWN and FIELD.*

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors who have credit for 1 or its equivalent. *1st division, Tu., Th.*, at 10.20; *2d division, Tu., Th.*, at 12.20.

‡ This course is preliminary to the other courses in the department except 9, 10, and may be followed by 2, 13, 4, 7 for engineering students; or by 4; or by the geographic series, 6, 5, which is planned to be especially useful to students who intend to teach geography or physiography in secondary schools, to enter schools of commerce, or to engage in business with inter-continental relations.

7. *Economic Geology*

The geology of fuels, the major ores, of raw materials used for structural and building purposes; their geographic distribution, geologic occurrence, recognition, and production. *Professors BROWN and FIELD.* Three hours. Second semester. Two lecture and two laboratory hours. Elective for Sophomores, Juniors, and Seniors who have credit for 1 or its equivalent.

5. *General Geography of Latin America*

A study of the topography and climate, natural resources, distribution of agricultural and other products, and the development of transportation routes and commerce. *Professor BROWN.*

Three hours. Two lecture and two conference hours. First semester. Elective for Undergraduates except Freshmen and Sophomores who are taking another course in the department. *1st division, Tu., Th., at 10.20; 2d division, Mon., Wed., at 12.20.*

2. *Elementary Historical Geology*

The geological history of the earth from its origin to recent times, emphasizing North America, its dynamic, geographic, and climatic changes, and evolution of life. *Professor FIELD.*

Three hours. Second semester. Elective for Undergraduates who have credit for 1, or its equivalent. *Mon., Wed., Fri., at 10.20.*

13. *Stratigraphy*

Detailed study of the problems connected with the stratigraphy, paleontology, and index fossils of North America. *Professor FIELD.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates who have credit for 1, or 17, 18.

9, 10. *Mineralogy and Petrography*

An introductory course in the macroscopic and microscopic study of minerals, ores, and rocks, their chemical relations and economic uses. First semester: discussion of crystal forms and the laws of crystallography; determination by physical properties and blow-pipe analysis of the more common minerals and ores. Second semester: study of the optical properties of the rock-forming minerals, rocks, and ores, under the polarizing microscope; determination of rock types; discussion of the fundamental principles of the origin and classification of rocks. —.

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors. Laboratory fee, \$3 a semester. Offered but not given in 1919-20.

11, 12. *Research in Geology and Geography*

Advanced work in the library, laboratory, or field, in the various phases of geology or geography. Arranged to meet the needs of individual students. The region in which the University is situated provides unusual opportunities in a small compass for the study of both simple and complex problems in physiographic, metamorphic, petrographic, mineralogic, paleontologic, and stratigraphic geology. *Professors BROWN and FIELD.*

One to six hours. Through the year. Elective for Graduates and approved Undergraduates. Either semester may be elected independently.

17, 18. *Paleontology*

The origin and significance of fossil plants and animals, with special reference to their evolution as shown by the paleontological record. Emphasis is laid upon the morphology, classification, and development of groups that are extinct, or only poorly represented at the present time. *Professor FIELD.*

Three hours. Through the year. Two lecture and two laboratory hours. Elective for Sophomores, Juniors, or Seniors. Either semester may be elected independently. Geology 1 and Biology 1 are recommended as preliminaries.

XII. GERMANIC LANGUAGES AND LITERATURES

ASA CLINTON CROWELL, PH.D., *Associate Professor of the Germanic Languages and Literatures*

ROBERT MCBURNEY MITCHELL, PH.D., *Assistant Professor of the Germanic Languages and Literatures*

1, 2. *Elementary German, First Year*

Aims to enable the student to read easy German prose. Grammar, dictation, practice in writing. *Mr. MILLER.*

Three hours. Through the year. Elective for students who have not presented German for admission. Students wishing to complete six hours of elementary German in preparation for 5, 6 will also elect 1 A, 2 A. *Tu., Th., Sat., at 9.20.*

1 A, 2 A. *Elementary German, First Year*

Aims to acquaint the student with the vocabulary of daily life for use in speaking and writing. Reading, constant oral practice, simple connected composition. Essentials of grammar. *Professor CROWELL.*

Three hours. Through the year. Elective for students who have not presented German for admission. Students wishing to complete six hours of elementary German in preparation for 5, 6 will also elect 1, 2. *Mon., Th., Fri., at 4.*

3, 4. *Elementary German, Second Year*

Reading of modern German stories, lyrics, and descriptive prose. Review of grammar; composition and conversation. *Professor MITCHELL.*

Three hours. Through the year. Elective for students who have credit for 1, 2 or who have presented elementary German (1 year) for admission. *Tu., Th., Sat., at 9.20.*

5, 6. *Intermediate German*

Reading of fairly difficult modern German prose and one or two dramas of the classical period. Review of grammar; composition; conversation based upon the texts read. *Professor MITCHELL.*

Three hours. Through the year. Elective for students who have credit for 3, 4 or who have presented elementary German (2 years) for admission. *Tu., Th., Sat., at 10.20.*

5 A, 6 A. *Oral Practice and Composition*

Aims to afford facility in the practical use of the German language. Constant practice in speaking and writing. *Professor MITCHELL.*

Three hours. Through the year. Elective for students who have credit for 3, 4 and for others by permission. *Mon., Wed., Fri., at 9.20.*

7, 8. *Advanced German*

One drama of Goethe or Schiller; one drama of Kleist or Hebbel; lyrics; a modern novel. Talks in German on German literature; oral and written reports in German. *Professor CROWELL.*

Three hours. Through the year. Elective for students who have credit for 5, 6; or who have passed 3, 4 with grade B; or who have presented intermediate German for admission. *Tu., Th., Sat., at 10.20.*

9, 10. *Modern Germany: Advanced Composition*

Aims to train the student in speaking, reading, writing, and understanding modern German. Reading of difficult texts dealing with the political, economic, social, and educational institutions of modern Germany, its theatre, music, art, science, and philosophy. A month will be devoted exclusively to the study of current German newspapers and periodicals. Talks in German; oral and written reports in German; letter-writing, composition, conversation. *Professor MITCHELL*. Three hours. Through the year. Elective for students who have credit for 7, 8; or who have passed 5, 6 with grade *B* or 3, 4 with grade *A*; or who have presented intermediate German for admission. *Tu., Th., Sat., at 11.20.*

[17, 18. *Lessing and Schiller*]

Study devoted mainly to the dramas of Lessing and Schiller. Lessing the writer and reformer; his early dramas as precursors of his greater productions. English and French influence. The development of the middle-class tragedy. Problems common to all of Schiller's dramas. Reading and translations of representative pieces. Talks in German; reports in German and English.

Three hours. Through the year. Elective for students who have credit for 5, 6 and for others by permission. Not offered in 1919-20.

[23, 24. *Goethe*]

Study of Goethe's dramas including *Faust* (in the second semester), with selections from *Werthers Leiden* and *Dichtung und Wahrheit*. *Faust* compared with other productions in European literature presenting a kindred problem. Translation and interpretation of the texts. Talks in German; reports in German and English.

Three hours. Through the year. Elective for students who have credit for 5, 6 and for others by permission. Not offered in 1919-20.

19, 20. *Introduction to Scientific Prose*

Aims to aid students who expect to use German in the pursuit of other subjects. Careful study of word-formation and special vocabularies. Translation from such books as Greenfield's *Technical and Scientific German* and Du Bois-Reymond's *Wissenschaftliche Vorträge*. *Professor CROWELL*.

Three hours. Through the year. Elective for students who have credit for 5, 6 or its equivalent. *Mon., Wed., Fri., at 10.20.*

[13, 14. *The German Short Story*]

The development of the short story into a literary form. The study of the *Novelle* as represented by Kleist, Ludwig, Heyse, Storm, C. F. Meyer, Keller, and others, with frequent reference to the chief writers of the short story in France, England, and America. Lectures and reports in German and English.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10, or who have passed 5, 6 with grade *B*. Not offered in 1919-20.

15, 16. *The German Drama of the Nineteenth Century*

A study of the development of the German drama from waning romanticism to realism (Kleist, Grillparzer, Hebbel, Hauptmann, Sudermann), with frequent reference to the chief representatives of the modern drama in other countries. Lectures in German; oral and written reports in German and English. *Professor MITCHELL*.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10, or who have passed 5, 6 with grade *B*. *Tu., Th., Sat., at 12.20.*

25, 26. *German Literature to the End of the Classical Period*

Aims to acquaint the student with the most important movements in the evolution of German literary life before 1832. Lectures in German; reports on assigned topics; extensive reading. *Professor CROWELL*.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. *Tu., Th., Sat., at 11.20.*

[27, 28. *German Literature in the Nineteenth Century*]

A study of the literary life of Germany as an expression of German civilization in the nineteenth century. The Romantic School, Young Germany, Naturalism, Realism, Neo-Romanticism; frequent references to prominent personalities in other domains of intellectual life. Lectures in German; reports on assigned topics; extensive reading.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. Not offered in 1919-20.

[31. *Gothic*]

The Gothic language, with reading of extracts in Streitberg's *Gotisches Elementarbuch* or Braune's *Gotische Grammatik*.

Three hours. First semester. Elective for Graduates and approved Undergraduates. Not offered in 1919-20.

[32. *Old High German*]

Grammar and reading of selections in prose and verse. Some knowledge of Gothic expected. Braune's *Althochdeutsche Grammatik* and Braune's *Althochdeutsches Lesebuch*.

Three hours. Second semester. Elective for Graduates and approved Undergraduates. Not offered in 1919-20.

[35, 36. *Middle High German*]

The German language and literature of the twelfth and thirteenth centuries; elements of grammar; translation into English and modern German of selections from the most important epics and lyrics; *Das Nibelungenlied*, *Walther von der Vogelweide*, *Hartmann von Aue*, and *Wolfram von Eschenbach*.

Three hours. Through the year. Elective for Graduates and approved Undergraduates. Not offered in 1919-20.

XIII. GREEK LITERATURE AND HISTORY

FRANCIS GREENLEAF ALLINSON, PH.D., *David Benedict Professor of Greek Literature and History, Director of the Museum of Fine Arts*

KENDALL KERFOOT SMITH, PH.D., *Assistant Professor of Greek Literature and History*

A, B. *Beginner's Course: Greek Grammar, Xenophon, and Homer*

The student may expect by the end of the course to have read at least one book each in Xenophon's *Anabasis* and Homer's *Iliad*. He will be admitted in the following year to Greek 1 and 2 if he completes an amount of Greek poetry and prose sufficient to enable him to pursue Greek 1 and 2 with advantage. To facilitate this, the necessary extra instruction will be given by the Greek department during the first semester in connection with Greek 1 or, if preferred, an examination on a supplementary summer course in reading will be accepted.

Three hours. Through the year. Elective for students who have not presented elementary and advanced Greek for admission. *Mon., Wed., Fri., at 12.20.*

1. *Homer and other Greek Poetry exclusive of the Drama*

Selections from the *Iliad* and the *Odyssey*, from the more important lyric poets, and from the Epigrams. *Professor SMITH.*

Three hours. First semester. Elective for students who have presented elementary and advanced Greek for admission, or who have credit for A, B and have done the additional work indicated above. *Tu., Th., Sat., at 10.20.*

2. *Plato and Lysias*

Plato: *Apology* and *Crito*, with selections from the *Phaedo*, and collateral readings from Xenophon's *Memorabilia* and the *Clouds* of Aristophanes. Lysias: *Orations* VII, XXII, XXIII, XXIV. *Professor ALLINSON.*

Three hours. Second semester. Elective for students who have credit for 1. *Tu., Th., Sat., at 10.20.*

3. *Lucian and the Dramatic Poets*

Selections from Lucian. Lectures on the Greek drama. The *Oedipus Tyrannus* of Sophocles and collateral reading in the *Prometheus* of Aeschylus. *Professor ALLINSON.*

Three hours. First semester. Elective for Sophomores. *Mon., Wed. Fri., at 10.20.*

4. *The Historians*

The eighth book of Herodotus, with collateral reading of the *Persians* of Aeschylus and Plutarch's *Themistocles*. The seventh book of Thucydides, with collateral reading of the *Acharnians* of Aristophanes. *Professor SMITH.*

Three hours. Second semester. Elective for Sophomores. *Mon., Wed., Fri., at 10.20.*

5. *The Drama*

Aeschylus: *Agamemnon*. Euripides: *Medea*. Aristophanes: *Frogs*. Menander: *Arbitrants* and *The Girl from Samos*. *Professor ALLINSON.*

Three hours. First semester. Elective for Juniors and Seniors. *Tu., Th., Sat., at 8.*

6. *Oratory*

Demosthenes: *On the Crown*; selections from his other speeches and from other Attic orators. *Professor SMITH.*

Three hours. Second semester. Elective for Juniors and Seniors.

[7. *Plato*]

Republic, I-X: selections in Greek, remainder in English. Collateral readings from the *Phaedrus* and *Meno*; *Protagoras*; *Timaeus*, *Critias*, and *Laws*.

Three hours. Second semester. Elective for Juniors and Seniors. Not offered in 1919-20.

[8. *Aristotle*]

The *Politics* and *Ethics*. A study of the fundamental Aristotelian principles of politics and ethics. The reading is mainly in English, but ability to use and interpret the Greek text will be constantly demanded.

Three hours. Second semester. Elective for Juniors and Seniors. Not offered in 1919-20.

12. *Greek Composition*

Professor ALLINSON.

One hour. Second semester. Elective for Undergraduates.

13, 14. *Modern Greek*

Introduction to the language; readings from living Greek authors and Greek newspapers. Designed for students intending to continue their preparation in Greek at the American School of Classical Studies in Athens. Professor SMITH.

One hour. *Tu. at 8.* Through the year. Elective for Juniors and Seniors.

15. *Greek Civilization*

The life of the Greeks from Homer to the second century after Christ, with special study of the political, social, and religious institutions of the classical period as illustrated by the literature, history, and monuments of art. Must be followed in the second semester by Latin 16, Roman Civilization. The two semesters together constitute the course in Classical Civilization. Professors ALLINSON and SMITH.

Three hours. First or second semester. Required in the Freshman or Sophomore year of candidates for the degree of Bachelor of Philosophy. Not elective. *1st division, Mon., Wed., Fri., at 9.20; 2d division, Mon., Wed., Fri., at 11.20.*

19. *Greek Literature in English*

The Greek poets and prose writers from Homer to Lucian. The Drama and Plato will be emphasized. The purpose of this course is to open up, for those who do not read Greek, the contributions of Hellenic Literature. Professors ALLINSON and SMITH.

Three hours. First or second semester. Elective for Undergraduates. Hours to be arranged. This course may be followed in the second semester by Greek 16.

16. *The Natural History of Language*

Geographical outline of the languages of the Eastern and Western Hemispheres. Divisions by structure. More detailed study of our Indo-European family of languages. *Professor ALLINSON.*

Three hours. Second semester. Elective for Undergraduates. Hours to be arranged. This course may be preceded in the first semester by Greek 19.

17, 18. *Greek Seminary*

First semester: Greek Sources for the History of the Near East. *Professor SMITH.* Second semester: Selections from the *Greek Anthology* arranged historically. Survey of the contemporary literature from *Solon* to *Lucian*. *Professor ALLINSON.*

Three hours. Two hours of attendance. Through the year. Elective for Graduates and approved Seniors.

XIV. HISTORY

THEODORE COLLIER, PH.D., *Professor of European History*

ST. GEORGE LEAKIN SIOUSSAT, PH.D., *George L. Littlefield Professor of American History*

1, 2. *Medieval and Modern History of Europe*

A general survey of the history of western Europe from the time of the barbarian invasions to the present. Lectures, text-book, assigned reading, reports, and frequent tests. *Professor COLLIER.*

Three hours. Through the year. Required of candidates for the degree of Bachelor of Arts in the Sophomore or Junior year, and of candidates for the degree of Bachelor of Philosophy in the Freshman, Sophomore, or Junior year. *Mon., Th., Fri., at 2.*

6. *European History, from 1815 to 1871*

Professor COLLIER.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 10.20.*

10. *European History, from 1871 to 1919*

Professor COLLIER.

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. A continuation of 6, but may, by permission, be taken independently. *Tu., Th., Sat., at 10.20.*

13, 14. *Seminary in European History*

Subject for 1919-20: The Far Eastern Question. *Professor COLLIER.* Three hours. Two hours of attendance. Through the year. Elective for approved Graduates and Seniors.

21, 22. *The United States under the Constitution*

A general course, with stress upon the economic and constitutional phases of American history since 1787. *Professor SIOUSSAT.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates, and for Sophomores who have had 1, 2 or an equivalent. Either semester may be elected independently, but 22 should preferably be preceded by 21. *Tu., Th., Sat., at 9.20.*

27, 28. *The History of the United States in its Contact with Foreign Nations*

Professor SIOUSSAT.

Three hours. Through the year. Either semester may be elected independently. Elective for Juniors, Seniors, and Graduates, and for Sophomores who have had 1, 2 or an equivalent. *Tu., Th., Sat., at 11.20.*

25, 26. *Seminary in American History*

Designed to afford training in the methods of historical investigation and the use of sources through the intensive study of some selected topics in a limited field. Subject for 1919-20: Colonial and State Lands and Land Policies, 1750-1800. *Professor SIOUSSAT.*

Three or six hours. Two or three hours of attendance. Through the year. Elective for Graduates and approved Seniors. Should be preceded by one or more courses in American history; but in exceptional cases may be taken by students who at the same time are taking 21, 22 or 27, 28.

XV. MATHEMATICS†

ROLAND GEORGE DWIGHT RICHARDSON, PH.D., *Professor of Pure Mathematics*

OTIS EVERETT RANDALL, PH.D., *Professor of Applied Mathematics*

HENRY PARKER MANNING, PH.D., *Associate Professor of Pure Mathematics*

RAYMOND CLARE ARCHIBALD, PH.D., *Associate Professor of Pure Mathematics*

CLINTON HARVEY CURRIER, A.M., *Assistant Professor of Mathematics*

ROBERT WILBUR BURGESS, PH.D., *Assistant Professor of Mathematics*

RAY EDWIN GILMAN, PH.D., *Assistant Professor of Mathematics*

CLARENCE RAYMOND ADAMS, A.B., *Instructor in Mathematics*

61, 62. *Elementary Analysis, First Year*

This course is designed to give a brief introduction to some of the concepts and methods of mathematics. Selected topics from Graphical Representation, Trigonometry, Analytic Geometry, and Calculus, which give an introduction to the fundamental mathematical ideas of scientific and economic theories, will be presented. *Professors RICHARDSON, CURRIER, BURGESS, and GILMAN, Mr. ADAMS.*

Three hours. Through the year. Elective for students who have not taken any mathematics in college and who have not presented Plane Trigonometry for admission. *Two divisions, Mon., Wed., Fri., at 9.20; three divisions, Tu., Th., Sat., at 9.20; one division, Mon., Wed., Fri., at 10.20.* There is an honor division in each of the first two groups.

61 R. *Elementary Analysis*

A repetition of 61. *Professor ARCHIBALD.*

Three hours. Second semester. For those who enter the second semester, and for others who have no credit for this course. *Tu., Th., Sat., at 8.*

† Students presenting the usual units for admission will naturally take 61, 62; those presenting Trigonometry, 63, 64. Those who wish to specialize in mathematics should consult some member of the department before registering, and should, if possible, take two courses in the first year. For the second and following years 65, 66, 7, 8 is the regular sequence and in addition the student should take 1, 3 (if he has not already credit for them), and as many as possible of the courses 11, 12, 21-44, 55, 56.

It is recommended that students who contemplate teaching in the secondary schools elect courses through 8, 27, and 41-44.

Courses 17-20, 50, are primarily for candidates for the degree of Bachelor of Science, but may be elected by others who wish to advance more rapidly with their mathematical preparation.

Courses 21-40, 55, 56 are designed primarily for Graduates. Two or three of these courses are offered each year according to the needs of the students. For those who have taken all of them, other courses can usually be arranged.

Unless elected by five students, courses 21-40 and 55, 56 may not be given.

63, 64. *Elementary Analysis, First Year*

This course is similar to 61, 62, except that Algebra will be substituted for Trigonometry. *Professor ARCHIBALD and Mr. ADAMS.*

Three hours. Through the year. Elective for students who have credit for Plane Trigonometry. *Two divisions, Mon., Wed., Fri., at 9.20.*

1. *Solid Geometry*

Professors MANNING and ARCHIBALD.

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors, and for Freshmen who have not presented Solid Geometry for admission and who wish to take an additional course. Required without college credit of candidates for the degree of Bachelor of Science who have not presented it for admission. *Two divisions, Tu., Th., Sat., at 8.*

3. *Algebra*

Permutations and combinations, probability, complex numbers, theory of equations, etc. Fundamental for students who wish to specialize in mathematics. *Professor MANNING.*

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors, and for Freshmen who did not present Advanced Algebra for admission and who wish to take an additional course. *Tu., Th., Sat., at 8.*

65, 66. *Elementary Analysis, Second Year*

This course is a continuation of Elementary Analysis, First Year. New topics in Trigonometry, Analytic Geometry, and Calculus will be taken up and more thorough training given in those already covered. *Professor RICHARDSON.*

Three hours. Through the year. Elective for students who have credit for 62. *Mon., Wed., Fri., at 9.20.*

7, 8. *Analytic Geometry and Differential and Integral Calculus* *Professor GILMAN.*

Three hours. Through the year. Elective for students who have credit for 6 (112) as offered before 1919-20.

9. *Differential Equations*

Professor BURGESS.

Three hours. First semester. Elective for students who have credit for 8 or 20. A part of this course, counting for one hour, is required during the first third of the semester of candidates for the degree of Bachelor of Science in Electrical Engineering. *Tu., Th., Sat., at 12.20.*

10. *Graphical Methods*

This course, designed primarily for engineering students, gives an introduction to the use of graphical methods employed in the solution of problems and includes the following topics: charts for equations in two and three variables, alignment charts, empirical formulae, interpolation. Based on Lipka's *Graphical and Mechanical Computation*.
Professor BURGESS.

Three hours. Second semester. Elective for those who have credit for 7, 8 or 19, 20. *Tu., Th., Sat., at 12.20.*

[11. *Analytic Geometry of Three Dimensions*]

An introductory course based on Snyder and Sisam's *Analytic Geometry of Space*, pages 1-108.

Three hours. First semester. Elective for students who have credit for 7, 8, and for others by permission. Not offered in 1919-20.

[12. *Modern Analytic Geometry*]

Topics in Plane Analytic Geometry with special reference to tangential coördinates.

Three hours. Second semester. Elective for students who have credit for 7, 8, and for others by permission. Not offered in 1919-20.

16. *Spherical Trigonometry*

Professor CURRIER.

One hour. Second semester. Elective for students who have credit for Plane Trigonometry. Should be taken by students who plan to elect Navigation.

17, 18. *Plane Trigonometry, Analytic Geometry, and Calculus*

Professors MANNING, BURGESS, and GILMAN, Mr. ADAMS.

Four hours. Through the year. Required of candidates for the degree of Bachelor of Science. *Three divisions, Mon., Tu., Th., Fri., at 11.20.*

19, 20. *Analytic Geometry and Calculus*

Professors RICHARDSON and GILMAN.

Three hours. Through the year. Required of candidates for the degree of Bachelor of Science. *Two divisions, Tu., Th., Sat., at 10.20.*

19 X. *Analytic Geometry and Calculus*

This covers 121 and 19. Mr. ADAMS.

Six hours. First semester. *Tu., Th., Sat., at 10.20; Mon., Wed., Fri., at 11.20.*

21, 22. *Function Theory of a Complex Variable*

Professor RICHARDSON.

Three hours. Through the year. Elective for Graduates and approved Undergraduates. *Tu., Th., Sat., at 11.20.*

[25, 26. *Advanced Algebra*]

Three hours. Through the year. Elective for students who have credit for 3, 41, 42, and for others by permission. Not offered in 1919-20. To be offered in 1920-21.

[27, 28. *Projective Geometry*]

Introductory course. The synthetic treatment of the subject during the first semester is based on Dowling's *Projective Geometry*; the analytic treatment of the second semester consists mainly of topics from Salmon's *Conic Sections*.

Three hours. Through the year. Elective for Graduates and approved Undergraduates. Not offered in 1919-20. To be offered in 1920-21.

[29, 30. *Introduction to Analysis*]

The foundations of the differential calculus; definite integrals; line integrals; multiple integrals.

Three hours. Through the year. Elective for students who have credit for the Calculus, and who have credit for or are taking 41, 42. Not offered in 1919-20. To be offered in 1920-21.

[31, 32. *Applications of Calculus to Geometry*]

Introductory course in the Differential Geometry of plane and space curves, curved, ruled, and developable surfaces, families and nets of curves on surfaces, triply orthogonal systems of surfaces, and conformal representation of one surface upon another. The historical development of the subject is also presented, and Gauss's memoir on "General Investigations of Curved Surfaces" is read.

Three hours. Through the year. Elective for students who have credit for 8 or 20. Not offered in 1919-20.

[39, 40. *Course in Advanced Topics*]

Amount of credit to be arranged. Elective for Undergraduates and Graduates who have adequate preparation. Not offered in 1919-20.

[41, 42. *Fundamental Problems of Algebra*]

An introduction to some of the concepts of modern analysis; designed for students who expect to teach as well as for those who are preparing for advanced work in mathematics. Among the topics to be treated are: the number system; limits; infinite series; the fundamental operations.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1919-20. To be offered in 1920-21.

43, 44. *Foundations, Methods, and Problems of Geometry*

Designed for those who expect to teach mathematics. The main topics of the course will be: foundations; Euclid and his modern rivals; American, French, German, and Italian texts; methods for attacking Euclidean problems; geometrography; famous problems; history. *Professor ARCHIBALD.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 12.20.*

50. *Descriptive Geometry*

Professor RANDALL.

Three hours. Second semester. Required in the Freshman year of candidates for the degree of Bachelor of Science who have credit for Mechanical Drawing 1. Elective without Mechanical Drawing for other approved students. *Mon., Wed., Fri., at 10.20.*

53. *Mathematical Theory of Investment*

The computation of interest, both simple and compound; the amortization of debts, the theory of bond values, depreciation, sinking funds, inheritance taxes, annuities, and life insurance. Based on Skinner's *The Mathematical Theory of Investment*. *Professor CURRIER.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates who have credit for one year of college mathematics. *Mon., Th., 4 to 5.30.*

54. *Mathematical Theory of Statistics*

Use of statistical methods, statistical averages, measurement of variability, dispersion and skewness, measurement of relationship, the correlation coefficient, the frequency curve, use of tabular and graphic methods, index numbers. *Professor BURGESS.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates who have credit for one year of college mathematics. Hours to be arranged.

55, 56. *Theoretical Mechanics*

An introductory course in statics and dynamics with numerous problems. *Professor MANNING.*

Three hours. Through the year. Elective for Graduates and approved Undergraduates who have credit for 7, 8 or 19, 20. *Wed., Fri., at 8; Tu. at 3.*

XVI. MUSIC

EDWIN ERNEST WILDE, *Lecturer in Music*

[1. *The Appreciation of Music*]

Designed to foster an intelligent appreciation of music by acquainting the student with the principles underlying musical composition and with their application by composers from Palestrina to Beethoven.

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors. Not offered in 1919-20.

[2. *Romanticism in Music*]

A study of developments in music since 1800. Discussion of such subjects as nationalism, dissonance, and ultra-modern tendencies. Analytical study of important works of representative composers from Beethoven to Strauss, Debussy, and Elgar.

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors. Not offered in 1919-20.

3. *The Symphony*

Designed to cultivate an intelligent listening to symphonic music. Analysis of orchestral forms from 1650 to the present, with a study of the various instruments used in a modern symphony orchestra. Lectures, illustrations at the piano, by soloists, and by phonograph. Previous musical knowledge not required.

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors. *Mon., Wed., Fri., at 12.20.*

4. *The Opera*

A history of operatic composition. Analysis of musico-dramatic works from the first attempts of the Florentine reformers to the masterpieces of Wagner and Debussy. Lectures and illustrations by phonograph. Previous musical knowledge not required.

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors.
Mon., Wed., Fri., at 12.20.

5, 6. *Harmony and Elementary Musical Form*

Designed to develop an ability to recognize in aural analysis the harmonies of major and minor modes and to employ the same in the composition of original short forms. A correct ear and the knowledge of music-notation are required. *Mr. WILDE.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors.
Tu., Th., Sat., at 12.20.

XVII. NAUTICAL SCIENCE

FREDERICK SLOCUM, PH.D., *Professor of Nautical Science*

THEODORE HENRY BROWN, PH.D., *Assistant Professor of Nautical Science*

1, 2. *Navigation*

Compass and chart; piloting; plane sailing, middle latitude sailing, Mercator sailing; dead reckoning; the sextant; determination of latitude and longitude by the sun, moon, planets, and stars; azimuth; line of position by the methods of Sumner, St. Hilaire, and Aquino; great circle sailing; theory and practice of compass adjustment. *Professors SLOCUM and BROWN.*

Three hours. Four hours of attendance. Through the year. Elective for students who have credit for Plane Trigonometry. Recitations, *Wed., Fri., at 8.* Laboratory hours to be arranged.

3, 4. *Seamanship*

Rules of the road; aids to navigation; hull, fittings, and rig of various types of ships; ground tackle; propellers; steering gear and steering; ropes, blocks, and purchases; handling and manoeuvring of steamships; boats and boat equipment; stowage of cargo; duties of crew and officers. *Professors SLOCUM and BROWN.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors.
Tu., Th., Sat., at 8.

5, 6. *Ship's Business*

Tonnage; ship's papers; shipping articles; charter party; bill of lading; manifest; clearance and entrance; pilotage; the log book; trade

routes; ports and terminals; rates; subsidies; marine insurance; rules and regulations pertaining to ships, crew, and cargo. *Professor BROWN.* Three hours. Through the year. Elective for Juniors and Seniors. *Tu., Th., Sat., at 10.20.*

7. History and Development of the American Merchant Marine from its beginning down to the present

Professor SLOCUM.

Three hours. First semester. Elective for Juniors and Seniors. *Mon., Wed., Fri., at 10.20.* This will be followed in the second semester by a course on Sea Power, Political Science 16.

9, 10. Advanced Course in Navigation

Problems in navigation, nautical astronomy, compass adjustment, and chart work. *Professor SLOCUM.*

Three hours. Through the year. Elective for students who have credit for 2 and for Calculus. *Mon., Wed., Fri., at 11.20.*

XVIII. PHILOSOPHY†

EDMUND BURKE DELABARRE, PH.D., *Professor of Psychology*

WALTER GOODNOW EVERETT, PH.D., *Professor of Philosophy and Natural Theology*

ALFRED HARRISON JONES, PH.D., *Associate Professor of Logic*

BENJAMIN MALCOLM HARRIS, B.D., A.M., *Assistant in Philosophy*

1, 2. Introduction to Philosophy

Designed to prepare the student for the study of philosophy, and to acquaint him with some of its most significant problems and results. *Professor JONES.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Mon., Wed., Fri., at 9.20.*

3, 4. Psychology and Ethics

First semester: Psychology. A survey of the main facts and laws of mental life, aiming to provide a sound foundation for further acquaintance with this and allied subjects, for an improved judgment in dealing with many practical problems, and for understanding the psycho-

† The required work in Philosophy must be completed not later than the end of the Junior year.

logical bases of philosophy. Second semester: Ethics. An introductory course dealing in a concrete way with the moral values of daily experience, and intended to aid the student in forming a practical philosophy of life. First semester, *Professor DELABARRE*. Second semester, *Professor EVERETT*.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Either semester may be elected independently by Seniors. *Tu., Th., Sat., at 9.20.*

5, 6. *Psychology, Intermediate Course*

A study of the fundamental principles on which a scientific system of psychology must be based; the nature and composition of consciousness, its relation to bodily processes, and its complete subjection to law; the criteria for accepting evidence and forming sound judgments in connection with the problems of so-called psychical research. *Professor DELABARRE*.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for a course in Psychology.

7, 8. *History of Philosophy*

The successive philosophical systems as revealing the logical development of European philosophy. The course also aims to exhibit the significant relations which philosophy has sustained to civilization, especially in its fundamental political, scientific, religious, and cultural elements. *Professor EVERETT*.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 10.20.*

9. *Philosophy of Religion*

A constructive study of the nature of the religious consciousness, and of the ultimate problems of religious belief. *Professor EVERETT*.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates who have credit for a year course in Philosophy. *Tu., Th., Sat., at 9.20.* May be taken with 4 to satisfy the requirement of a year's work in Philosophy.

30. *History of Religion*

An outline study of the history of the principal religions of the world. This course is the same as Biblical Literature 30. *Professors FOWLER and JONES*.

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 10.20.*

10. *Applications of Psychology*

Description of some of the important ways in which the principles of psychology are being practically applied to the problems of modern life. *Professor DELABARRE.*

Three hours. Second semester. Elective for students who have credit for 3. *Tu., Th., Sat., at 8.* May be taken with 3 to satisfy the requirement of a year's work in Philosophy.

11, 12. *Experimental Psychology, Introductory Laboratory Course*

Description of the main lines and results of experimental research; demonstrations by the instructor or the class; training in the use of apparatus and in careful scientific observation and measurement. *Professor DELABARRE.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 3.

13. *Logic*

Intended to train the student in correct methods of reasoning. Especial attention will be given to the analysis of arguments, and the detection of fallacies. *Professor JONES.*

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 11.20.* May be taken with 4 to satisfy the requirement of a year's work in Philosophy.

14, 15. *Contemporary Philosophy*

A seminary for the study of important philosophical theories of the present day. During 1919-20 the works of Bosanquet and Royce will be read. *Professor JONES.*

Three hours. Through the year. Elective for Seniors and Graduates.

17, 18. *Psychology, Advanced Course*

A seminary for the discussion of important problems in psychology. The problems discussed will vary, and the course may be taken for two or more years. *Professor DELABARRE.*

Three hours. Through the year. Elective for Seniors and Graduates who have credit for 5, 6.

19, 20. *Experimental Psychology, Advanced Laboratory Course*

The aim is to study further the problems of experimental psychology,

and, whenever possible, to make original contributions to scientific knowledge. The problems investigated will vary, and the course may be taken for two or more years. *Professor DELABARRE.*

One to six hours. Two to twelve hours of attendance. Through the year. Elective for students who have credit for 11, 12. May be taken for more than six hours by Graduates.

21, 22. *Advanced Ethics*

A seminary course for the study of the more important problems of ethics. Lectures, written reports, and discussions. Subject for 1919–20: Studies in Social Philosophy. *Professor EVERETT.*

Three hours. Through the year. Elective for Seniors and Graduates who have credit for a year course in Philosophy.

XIX. PHYSICS

CARL BARUS, PH.D., LL.D., *Hazard Professor of Physics*

ALBERT DE FOREST PALMER, PH.D., *Associate Professor of Physics*

1, 2. *Elementary Physics*†

Designed for those who have had little previous training in physics. First semester: dynamics, molecular physics, and heat. Second semester: optics, acoustics, and electricity. Discussion of and laboratory practice in the more elementary features of the subjects. Lectures illustrated by experiments in the class-room and in the laboratory; weekly written exercises. *Professor PALMER.*

Four hours. Seven hours of attendance. Through the year. Elective for Undergraduates who have credit for Entrance Algebra and Plane Geometry. *Mon., Wed., Fri., at 10.20.* Laboratory fee, \$4 a semester.

29, 30. *Elementary Physics*

A series of simple laboratory exercises designed to illustrate the general principles discussed in 1, 2. *Professor PALMER.*

One hour. Two hours of attendance. Through the year. Elective for Undergraduates who have credit for Entrance Algebra and Plane Geometry. Laboratory fee, \$4 a semester.

† Students who intend to teach Physics should elect courses 1, 2; 3, 4; 5, 6. Those who intend to enter medical school should elect 1, 2.

3, 4. *Elementary Physics, continued* ‡

The more advanced parts of the subjects treated as in 1, 2. *Professor BARUS.*

Three hours. Through the year. Elective for students who have credit for 1, 2, and Mathematics 1, 2. *Tu., Th., Sat., at 10.20.*

5, 6. *Experimental Physics*

An introduction to the theory and practice of physical manipulation. Experimental study of physical phenomena selected to meet the needs of individual students. Written reports and solution of problems. *Professor PALMER.*

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2. Laboratory fee, \$6 a semester.

11, 12. *Advanced Laboratory Course*

Special problems and reference to original sources for methods of solution. *Professors BARUS and PALMER.*

Three or six hours. Six or twelve hours of attendance. Through the year. Elective for students who have credit for 5, 6. Laboratory fee, \$6 a semester.

15, 16. *Physics, Advanced Course*

Lectures on dynamics, potential, elastics, hydrostatics, hydrodynamics, viscosity, capillarity, electrostatics, magnetism, electro-magnetism, thermo-electrics, induction, Fresnel's optics, the electro-magnetic theory of light, thermal analytics, and thermodynamics. This course will also include applications of vector and harmonic analysis. *Professor BARUS.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for Mathematics 7, 8. The content of the course will vary at the option of the students.

21, 22. *Theory of Measurements*

Lectures and recitations on the theory and precision of measurements, and on methods of taking, recording, and reducing observations; laboratory instruction in selected physical measurements. *Professor PALMER.*

‡ Graduates taking course 3, 4 are held responsible for all the class-room demonstrations, or for the full equivalent of either Edser's or Watson's or Daniel's *Principles of General Physics.*

Three hours. Five hours of attendance. Through the year. Elective for students who have credit for 1, 2, and Mathematics 7, 8 or 19, 20. *Tu., Th., at 12.20.* Laboratory fee, \$4 a semester.

23, 24. Precision Measurements in Photometry, Electricity, and Magnetism

Professor PALMER.

Four hours. Eight hours of attendance. Through the year. Elective for students who have credit for 5, 6 or 21, 22, and Mathematics 7, 8 or 19, 20. Laboratory fee, \$8 a semester.

XX. ROMAN LITERATURE AND HISTORY

ALBERT GRANGER HARKNESS, A.M., LITT.D., *Professor of Roman Literature and History*

JOHN FRANCIS GREENE, A.M., *Associate Professor of Roman Literature and History*

1. Cicero's De Senectute, De Amicitia; Terence's Phormio

Designed to enable the student to acquire facility in reading Latin, and to give an insight into the practical philosophy of the Romans in public and private life. *Professors HARKNESS and GREENE.*

Three hours. First semester. Elective for students who have presented elementary and advanced Latin for admission. *Tu., Th., Sat., at 11.20.*

2. Selections from Horace

Critical study of certain poems, supplemented by rapid reading of others. The social and political ideals of the early Empire are emphasized. *Professors HARKNESS and GREENE.*

Three hours. Second semester. Elective for students who have presented elementary and advanced Latin for admission. *Tu., Th., Sat., at 11.20.*

3. Selections from Tacitus, Pliny the Younger, Martial

Especial attention will be given to the literary style and to the moral and social life of the period. *Professor GREENE.*

Three hours. First semester. Elective for Sophomores. *Mon., Wed., Fri., at 12.20.*

4. *Plautus' Captivi, Trinummus, Rudens*

The main objects will be to appreciate Roman comedy, to show its relation to modern comedy, and to acquire a feeling for Latin as a spoken language. *Professor HARKNESS.*

Three hours. Second semester. Elective for Sophomores. *Mon., Wed., Fri., at 12.20.*

5, 6. *Latin Poetry*

Aims to give a connected and comprehensive view of the history and development of Latin poetry. Lectures on the lives and writings of the authors; reading of characteristic selections; special study, by members of the class, of assigned topics in literary history and criticism. First semester: Plautus. Second semester: Lucretius and Catullus. Forms with 7, 8 a two-year consecutive course, affording a general survey of Roman literature. *Professors HARKNESS and GREENE.*

Three hours. Through the year. Elective for Juniors and Seniors. Either semester may be elected independently.

[7, 8. *Latin Prose*]

Aims to give a connected and comprehensive view of the history and development of Latin prose. Lectures on the lives and writings of the authors, on the development of oratory, etc.; reading of characteristic selections; special study, by members of the class, of assigned topics in literary history and criticism. First semester: specimens of early Latin, Cicero's *Brutus*, and Quintilian. Second semester: the *Annals* of Tacitus. Forms with 5, 6 a two-year consecutive course, affording a general survey of Roman literature.

Three hours. Through the year. Elective for Juniors and Seniors. Either semester may be elected independently. Not offered in 1919-20.

[11, 12. *Latin Composition*]

One hour. Through the year. Elective for Sophomores, Juniors, and Seniors. Offered but not given in 1919-20.

13, 14. *History of the Roman Empire*

The Early Empire; the Age of the Antonines; the Age of Constantine. *Professor GREENE.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Either semester may be elected independently. *Tu., Th., Sat., at 9.20.*

16. *Roman Civilization*

An outline of Roman civilization and its influence on modern times. Special attention will be given to the literature and to the political and social life. No knowledge of Latin required. Must be preceded in the first semester by Greek 15, Greek Civilization. The two semesters together constitute the course in Classical Civilization. *Professors HARKNESS and GREENE.*

Three hours. First or second semester. Required in the Freshman or Sophomore year of candidates for the degree of Bachelor of Philosophy. Not elective. *1st division, Mon., Wed., Fri., at 9.20; 2d division, Mon., Wed., Fri., at 11.20.*

[17, 18. *Seminary in Latin*]

Subject for 1919-20: Reading from the poetry of the Empire. Gude-man's *Latin Literature of the Empire*, vol. II. Questions in textual criticism and in the structure of Latin verse will be considered.

Three hours. Two hours of attendance. Through the year. Elective for Graduates. Offered but not given in 1919-20.

XXI. ROMANCE LANGUAGES AND LITERATURES

FRENCH, ITALIAN, SPANISH

COURTNEY LANGDON, A.B., *Professor of the Romance Languages and Literatures*

ALBERT BUSHNELL JOHNSON, A.M., *Associate Professor of the Romance Languages and Literatures*

CHARLES HERMAN HUNKINS, DR. UNIV. PARIS, *Associate Professor of the Romance Languages and Literatures*

EDOUARD R. MASSEY, A.M., B. ÈS LETTRES, *Instructor in French*

ALBERT EDWARD RAND, PH.B., *Instructor in French*

CHARLES LESTER SCANLON, *Assistant in Spanish*

1, 2. *Elementary French, First Year*

Grammar, composition, dictation, conversation; translation of selections from modern authors into idiomatic English. *Messrs. MASSEY and RAND.*

Three hours. Through the year. Elective for students who have not presented French for admission. *1st division, Mon., Wed., Fri., at 8; 2d division, Tu., Th., Sat., at 8.*

3, 4. *Elementary French, Second Year*

Reading of easy modern French prose in the form of stories, plays, or historical or biographical sketches; review of grammar; composition and conversation based upon the texts read. *Professor HUNKINS and Mr. RAND.*

Three hours. Through the year. Elective for students who have credit for 1, 2 or who have presented elementary French (1 year) for admission. *Mon., Wed., Fri., at 8.*

5, 6. *Intermediate French*

Reading of modern and classical authors; review of grammar; composition and conversation based upon the texts read; dictation. *Professor HUNKINS, Messrs. MASSEY and RAND.*

Three hours. Through the year. Elective for students who have credit for 3, 4 or who have presented elementary French (2 years) for admission. *1st and 3d divisions, Tu., Th., Sat., at 9.20; 2d division, Mon., Wed., Fri., at 9.20.*

7, 8. *Advanced French*

An introduction to classical and modern French literature; composition; conversation based on the texts read; dictation. *Professor HUNKINS, Messrs. MASSEY and RAND.*

Three hours. Through the year. Elective for students who have credit for 5, 6 or who presented intermediate French for admission. *1st and 3d divisions, Mon., Wed., Fri., at 9.20; 2d division, Tu., Th., Sat., at 11.20.*

[9, 10. *The Realistic School*]

Flaubert, Augier, the younger Dumas, the Goncourts, Daudet, Zola, Taine, Loti, and others; abstracts, in French, of works read outside the class; sight reading a prominent feature. The course will be conducted largely in French.

Not offered in 1919-20.

11, 12. *The Romantic School*

The history of the romantic school; reading of authors from Chateaubriand and Victor Hugo to Balzac; abstracts of works read outside the class. The course will be conducted largely in French. *Professor HUNKINS.*

Three hours. Through the year. Elective for students who have credit for 7, 8. *Mon., Wed., Fri., at 10.20.*

23, 24. *Practice in Writing and Speaking French*

Intended especially for those preparing to teach. Written and oral translations from English into French. Conversation; dictation; phonetics. *Mr. MASSEY.*

Three hours. Through the year. Elective for students who have credit for 7, 8. *Mon., Wed., Fri., at 11.20.*

17, 18. *Elementary Italian, First Year*

Grammar, composition, and reading of modern authors. *Professor LANGDON.*

Three hours. Through the year. Elective for Juniors and Seniors, and for Sophomores not electing more than one other modern language. *Mon., Wed., Fri., at 9.20.*

19, 20. *Dante in English*

A study of the whole of the *Divina Commedia* in English, in the light of modern thought and of other world-poems. *Professor LANGDON.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Students are advised to elect this course in their Senior year. *Mon., Wed., Fri., at 11.20.*

15, 16. *Elementary Spanish, First Year*

Grammar, conversation, composition, and reading of modern authors. *Professor JOHNSON and Mr. SCANLON.*

Three hours. Through the year. Elective for Juniors and Seniors, and for Sophomores not electing more than one other modern language. *1st division, Tu., Th., Sat., at 9.20; 2d division, Tu., Th., Sat., at 11.20; 3d division, Tu., Th., Sat., at 9.20; 4th division, Tu., Th., Sat., at 11.20.*

21, 22. *Elementary Spanish, Second Year*

Reading of modern authors; review of grammar; composition; conversation. *Professor JOHNSON.*

Three hours. Through the year. Elective for students who have credit for 15, 16 or who presented elementary Spanish (1 year) for admission. *Mon., Wed., Fri., at 11.20.*

25, 26. *Intermediate Spanish*

Reading of modern authors, with special attention to South America. Composition, conversation, teaching methods. *Professor JOHNSON.*

Three hours. Through the year. Elective for students who have credit for 21, 22, or who presented elementary Spanish (2 years) for admission. *Mon., Wed., Fri., at 10.20.*

27, 28. *French Literature and Civilization*

An interpretation of French culture as seen in its literature, history, religion, and philosophy. *Professor* LANGDON.

Three hours. Through the year. Elective for students having credit for 5, 6. *Tu., Th., Sat., at 10.20.*

XXII. SOCIAL AND POLITICAL SCIENCE†

JAMES QUAYLE DEALEY, PH.D., *Professor of Social and Political Science*

JOHN CORLISS DUNNING, LL.B., PH.D., *Assistant Professor of Political Science*

HAROLD STEPHEN BUCKLIN, PH.D., *Assistant Professor of Social Science*

SOCIAL SCIENCE§

1. *Elementary Social and Political Science*

Affords a general outline of these subjects, and serves as an introduction to the more extended and special courses that follow. *Professor* DEALEY.

Three hours. In connection with Economics 1 constitutes a year course required in the Sophomore or Junior year of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy, and in the Sophomore year of candidates for the degree of Bachelor of Science. The combined courses will be given in two sections. For the first section Economics will be given in the first semester and Social and Political Science in the second semester. *Tu., Th., Sat., at 10.20.* For the second section Social and Political Science will be given in the first semester and Economics in the second semester. *Mon., Wed., Fri., at 12.20.* Students must indicate their choice of sections on the registration card.

3, 4. *Modern Social Problems*

An analysis of the problems of poverty, disease, crime, and immigration as found in the United States; accompanied by a study of the

† Semester courses in this department may be elected separately unless otherwise stated.

§ The advanced courses in Social Science are elective for students who have credit for Economics 1 and Social and Political Science 1.

philosophy and methods of private and public agencies dealing with them. Lectures, assigned readings, individual observation and investigation, class visits to institutions, and descriptive talks by workers in local organizations. *Professor* BUCKLIN.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 11.20.*

[5. *Social Institutions*]

A survey of the fundamental social institutions, and a study of the development and trend of the most important. *Professor* BUCKLIN.

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. Not offered in 1919-20.

9, 10. *The Social Survey*

A study of typical surveys in the fields of health, education, industry, charities, corrections, housing, mental hygiene, recreation, and child welfare; accompanied by practice in making group and community studies. During the year the class will make a coöperative survey of state provisions for the dependents, delinquents, and defectives of Rhode Island. *Professor* BUCKLIN.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.20.*

16. *Social Psychology*

Psychological principles underlying social order and progress; social suggestion and imitation; the psychology of social groups; applications of the principles of social psychology to modern social problems. *Professor* DEALEY.

Three hours. First semester. Followed in the second semester by 15. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 9.20.*

15. *Sociology*

Its fundamental teachings; principles underlying the development of society and its great social institutions; applications of these principles to the theory of social progress. A survey of the constructive trend in modern civilization. *Professor* DEALEY.

Three hours. Second semester. Preceded by 16 in the first semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 9.20.*

11, 12. *Seminary in Sociology*

First semester: a study of ancient and medieval teachings relating to society and social progress; the great precursors of sociology in the eighteenth century. Second semester: a survey of the chief sociological systems set forth since the beginning of the nineteenth century, and the influence exerted by these on the life and institutions of modern society. Contemporary social theories. *Professor DEALEY.*

Three hours. Through the year. Elective for Seniors and Graduates. *Mon., Th., 4.30 to 6.*

13, 14. *Social Research, Investigation, and Field Work*

Study and practice in methods of gathering, interpreting, and presenting data of social problems and movements; investigation of agencies and institutions dealing with social problems; field work with the coöperation of selected local agencies and institutions, accompanied by a study of the principles of case work. *Professor BUCKLIN.*

Three hours. Through the year. Five to eight hours of research or field work and one hour of class-room discussion. Must be preceded or accompanied by Social Science 3, 4 or Social Science 9, 10. Elective for Graduates and for a limited number of approved Juniors and Seniors. Hours to be arranged with the instructor.

POLITICAL SCIENCE‡

1. *Elementary Social and Political Science*

See Social Science 1.

3, 4. *Government and Politics of the United States*

First semester: national government, its organization, powers, and methods; current political issues. Second semester: municipal governments; framework and activities of European and American municipalities. *Professor DUNNING.*

Three hours. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 9.20.*

5. *Governments and Politics of Foreign States*

A study of comparative government and political development. Problems of world-politics. During the year 1919-20 special attention

‡ The advanced courses in Political Science are elective for students who have credit for Economics 1 and Social and Political Science 1.

will be given to the many political reorganizations resulting from the World War and the decisions of the Peace Conference. *Professor DEALEY.*

Three hours. First semester, followed in the second semester by 16. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 10.20.*

16. *Sea Power in War and in Peace*

A study of the origin and development of sea power. Its influence on national growth and on civilization. Special attention will be given to the policies of important states in respect to the navy. *Professor DEALEY.*

Three hours. Second semester, preceded by 5. Note also Nautical Science 7. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 10.20.*

6, 12. *International Law and Diplomacy*

A study of international relations. National policy as shown in diplomatic intercourse and in hostilities to which the United States has been a party. Present national diplomatic problems, including those of the Latin American States. International rights and obligations of citizens and resident aliens. *Professor DUNNING.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 10.20.*

7. *Jurisprudence and Business Law*

An analysis of the fundamental concepts of the science of law with special application to mercantile and commercial transactions; the historical development of Roman and English legal systems. *Professor DUNNING.*

Three hours. First semester. Followed in the second semester by 8. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 9.20.*

8. *Constitutional Law*

Principles and development of American constitutional law. Case system. *Professor DUNNING.*

Three hours. Second semester. Preceded in the first semester by 7. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 9.20.*

[9, 10. *Seminary in Political Science*]

A study of ancient and modern political theories. Rise of modern democratic principles. Present theories in respect to the state; its

origin, sovereignty, and forms of government. Relation of these theories to the practical problems arising from the World War.

Three hours. Through the year. Elective for Seniors and Graduates. Not offered in 1919-20.

13, 14. *Investigation of Special Topics*

Intended to train students in methods of gathering and presenting data in the study of political problems. In connection with this course, work in comparative legislation may be taken under the direction of the Legislative Reference Bureau of the State Library. *Professor DUNNING.*

Three hours. Six to nine hours of investigation and class-room work. Through the year. Elective for Graduates, and for a limited number of approved Seniors. Hours by arrangement.

XXIII. PHYSICAL TRAINING ‡

FREDERICK WILLIAM MARVEL, Ph.B., *Professor of Physical Training*

MYRON WHITMARSH FINCH, Sc.B., *Instructor in Physical Training*

ARCHIE HAHN, LL.B., *Instructor in Physical Training*

GEORGE FRANKLIN HERRICK, *Assistant in Physical Training*

ROSS ELMER BROWNING, *Assistant in Physical Training*

From Thanksgiving to the Spring Recess, all first and second year men are required to attend gymnasium exercises three times a week. The particular course will be assigned by the department.

Military Setting-up Exercises

For discipline, posture, coördination, and alertness. Games. *Professor MARVEL.*

Setting-up Exercises and Gymnastic Dancing

The work also includes the use of wooden and iron dumb-bells, indian clubs, bar bells, wands, and floor exercises. *Mr. BROWNING.*

Two divisions.

Swimming

Elementary, advanced, and competitive. Life saving, resuscitation, and games. *Mr. FINCH.*

‡ No charge is made for instruction in any branch of gymnastics or athletics.

Required, during the fall and spring, of all first year men who are unable to pass the test and of all other men who have not previously passed the test. Eight divisions. Three hours.

Boxing

Mass and Shadow Boxing similar to that taught in the Army and Navy. After the students become familiar with the blows, blocks, parries, and foot work they are paired off against each other. Accuracy and correct form are insisted upon. Boxing for points rather than hard blows is the aim. *Mr. HAHN.*

Three divisions.

Wrestling

Elementary, advanced, and competitive. *Mr. HERRICK.*

Three divisions.

Track Athletics

Elementary, advanced, and competitive. *Mr. HAHN.*

Three divisions.

Heavy Gymnastics

Elementary and advanced. *Mr. BROWNING.*

Handball

Mr. BROWNING.

ORIENTATION LECTURES

Lectures upon the scope and aims of college education by administrative officers and members of the Faculty.

The object of the course is to explain to the new students the organization and administrative system of the University; to instruct them concerning the general content of the academic curriculum; to describe the libraries, laboratories, and other facilities for study; to offer general advice regarding methods of study and the preservation of health; and to discuss the relation of the social organizations to the University and the students. The lectures will define and describe the general subjects of the curriculum, such as literature and language, art, philosophy, and the various sciences; discuss their relations to one another; and attempt to determine their intellectual, moral, esthetic, and vocational values.

RELIGIOUS EDUCATION

C*COURSES arranged for the training of directors of Religious Education in churches and allied organizations, lay assistants of pastors, teachers of the Bible, and other leaders in religious work.*

The growing demand for trained leaders in the work of religious education has led Brown University to arrange a special two-year course of study designed to meet the needs of mature men and women who may not be able to undertake a full degree course. Such persons will be received as special students in the University, provided their previous training has fitted them to pursue the various courses outlined below. On the successful completion of the two-year course a certificate will be awarded by the University. Those who are engaged in other occupations for a portion of their time may take a part of the work each year, completing the entire course in a longer period than two years. Regular undergraduate and graduate students may elect these courses.

FIRST YEAR

Old Testament Literature and History. *Biblical Literature and History 15, 16.*

Biblical Seminary (*subject for 1919-20 : The Teachings of Jesus*). *Biblical Literature and History 21, 22.*

Outlines of Economics. *Economics 1.*

History or Principles of Education. *Education 1 or 2.*

History of Christianity. *History 3, 4.*

Outlines of Social and Political Science. *Social Science 1, Political Science 1.*

Training Course for Religious Service. Special course, not counted toward a degree.

SECOND YEAR

New Testament Literature and History. *Biblical Literature and History 17, 18.*

Psychology of Education. *Education 3.*

Ethics. *Philosophy 4.*

Philosophy of Religion. *Philosophy 9.*

History of Religion. *Biblical Literature 30, Philosophy 30.*

Modern Social Problems. *Social Science 3, 4.*

Social Investigation and Training. *Social Science 13, 14.*

The above course is not intended to be absolutely fixed ; substitutions may be made to meet individual needs and, in some cases, the courses prescribed will be interchanged between the two years.

The University makes arrangements with leading churches, and with the Providence Christian Associations, the Rhode Island Sunday School Association, and the Society for Organizing Charity, for coöperation in the practical training of students in religious and social service as the needs of individual students dictate.

SUMMER SESSION, 1919

THE purpose of the session was to meet the needs of students whose course had been interrupted by the War, of students who desired to take summer work for advanced credit, and of teachers and other qualified persons who wished to pursue university study.

The session, including final examinations, extended through nine weeks from Monday, June 30, to Saturday, August 30, inclusive. Courses in general required five hours per week of class exercises or an equivalent in laboratory work. Certain courses were completed in six weeks. In most of the others, a major section of the work closed at that point and a final examination was given for those who desired it.

Academic credit of three semester hours was given for each full five-hour course. For the completion of a six-weeks' course, credit of two semester hours (three term hours) was given. Those who did not desire university credit were permitted to register as hearers.

For courses which required previous preparation, Brown students were expected to present the regular prerequisites. Other persons were admitted by consent of the officer in charge.

Courses were offered in :

Biblical Literature and History.

Biology.

Chemistry.

Economics.

Engineering—Civil, Electrical, and Mechanical.

English—Composition and Literature.

Geology.

Greek Civilization.

History—American and European.

Mathematics.

Philosophy.

Physical Culture.

Physics.

Roman Civilization.

Romance Languages and Literatures.

Social Science.

LIBRARIES, LABORATORIES, AND MUSEUMS

THE UNIVERSITY LIBRARY

HARRY LYMAN KOOPMAN, A.M., LITT.D., *Librarian*

THE libraries of the University contain two hundred and seventy thousand volumes. The MAIN LIBRARY is constantly increased with reference to the different courses of study, while at the same time there is kept in view the development of a library of general culture. It includes eight special libraries. The first is the Harris Collection of American Poetry, founded by Albert G. Greene, of the class of 1820, extended by C. Fiske Harris, and bequeathed to the University by the Hon. Henry B. Anthony, of the class of 1833, which numbers over twenty-seven thousand volumes. It is the largest collection in the world devoted to the subject, and is rapidly growing; a fund of ten thousand dollars given by Samuel C. Eastman, of the class of 1857, in memory of the founder of the collection, provides for its regular increase. The second is the Rider Collection of Rhode Island History, formed by Sidney S. Rider and presented to the University by Marsden J. Perry, a collection remarkable for the extent and rarity of its manuscript and printed material bearing on the history of the state. The third is the Wheaton Collection of International Law, given by William V. Kellen, of the class of 1872, in honor of Henry Wheaton, of the class of 1802. This collection already numbers over sixteen hundred volumes. The fourth is the George Earl Church Collection, the bequest of Colonel Church, consisting of thirty-five hundred volumes, many of them of great rarity, on the geography, history, and development of South America. The fifth is the Corthell Engineering Library, containing seven thousand volumes and pamphlets. This collection is particularly rich in works on river and harbor engineering. A fund of five thousand dollars given with the collection by the founder, Elmer L. Corthell, of the class of 1867, provides for its increase. The sixth is the Chambers Dante Collection, containing eleven hundred volumes besides many rare pamphlets, given by Henry D. Sharpe, of the class of 1894. The seventh is the private library of the late Professor Lester F. Ward, numbering one thousand volumes, relating especially to sociology and paleobotany. It was given by his family. The eighth is the Walter C. Hamm Collection of Newspaper Clippings, some 200,000 in number, chiefly in the field of politics and sociology, presented by Mr. Hamm, a member of the class of 1870.

On the floor of the stack which opens off the reading room has been placed a special collection known as the STUDENTS' LIBRARY, which consists of some seventeen thousand volumes selected for the use of undergraduates. To this

floor all students have free access. The other floors of the stack are open regularly to the Faculty, and to students by special permission.

The library is open during term time from 8.30 a.m. to 10 p.m. on week days, and from 2 to 10 p.m. on Sundays; during vacations on week days, from 9 a.m. to 5 p.m.

THE JOHN CARTER BROWN LIBRARY

THE JOHN CARTER BROWN LIBRARY, with the building erected for its use, was given to the University by the trustees under the provisions of the will of the late John Nicholas Brown, of the class of 1885. This collection, known as the most valuable library of Americana in the United States, was begun by John Carter Brown, of the class of 1816, and after his death was enlarged by his widow and by his sons, John Nicholas and Harold Brown. It possesses more than twenty thousand volumes in print and in manuscript relating to North and South America during the Colonial period, including rare and unique maps. The library may be used by properly qualified students or investigators. The building is open from 9 a.m. to 5 p.m. on week days, except on Saturdays, when it closes at 1 o'clock.

DEPARTMENT LIBRARIES

THE GERMANIC DEPARTMENT LIBRARY comprises over eight thousand volumes relating to German literature, philology, and history. The rooms, Sayles 6 and 7, are open on Monday, Tuesday, Thursday, and Friday, from 9.20 a.m. to 12.30 p.m., and from 3 to 4 p.m.

THE ENGLISH DEPARTMENT LIBRARY comprises about thirty-two hundred volumes, of which more than twenty-seven hundred came from the private library of the late Hammond Lamont, Professor of Rhetoric in Brown University from 1895 to 1900. The library is in the English Seminary rooms, in the John Hay Library.

THE LIBRARIES OF THE DEPARTMENTS OF GREEK AND LATIN constitute the Albert Harkness Classical Seminary, named in honor of its founder, the late Professor Albert Harkness. It comprises fifteen hundred volumes. It is contained in Sayles 8.

THE ROMANCE DEPARTMENT LIBRARY comprises sixteen hundred volumes. The room, Sayles 4, is open Monday, Wednesday, and Friday, from 11.20 a.m. to 12.20 p.m.; Tuesday, Thursday, and Saturday, from 10.20 to 11.20 a.m.; also usually evenings.

THE BIBLICAL DEPARTMENT LIBRARY comprises fifteen hundred and thirty volumes. The room, Sayles 3, is open from 9.20 a.m. to 12.30 p.m., from 2 to

5 p.m., and from 7 to 9 p.m., except Wednesday and Saturday afternoons and Saturday evenings.

THE BIOLOGICAL DEPARTMENT LIBRARY comprises twenty-six hundred and eighty bound periodicals, twenty-one hundred and thirty other books, and about two thousand pamphlets. Fifty-eight current periodicals are regularly received. The rooms, in the Arnold Biological Laboratory, are open from 9 a.m. to 12 m., and from 2 to 5 p.m., except Wednesday and Saturday afternoons.

THE EDUCATIONAL DEPARTMENT LIBRARY comprises about three thousand volumes, chiefly text-books of recent publication. It occupies the seminary rooms of the department, in the John Hay Library.

THE LIBRARY OF THE DEPARTMENT OF ECONOMICS comprises about seventeen thousand volumes and fifty thousand pamphlets, and receives regularly one hundred and fifty periodicals. The rooms are on the first floor of the old library building, and are open from 9 a.m. to 1 p.m. and from 2.30 to 5.30 p.m., except Saturdays, when the hours are from 9 a.m. to 1 p.m.

THE BOTANICAL DEPARTMENT LIBRARY comprises about fifteen hundred bound volumes, about five thousand pamphlets, and the more important current periodicals. The rooms of the department are in Maxcy Hall.

THE LIBRARY OF THE DEPARTMENT OF PHYSICS comprises files of the leading periodicals and a collection of standard works and monographs in all departments of Physics. The room, in Wilson Hall, is open daily.

THE MATHEMATICAL DEPARTMENT LIBRARY comprises nine hundred and thirty-five volumes of mathematical journals and twenty-five hundred and forty-eight other books, and receives regularly seventy current periodicals, including the most important publications in the English, French, German, Swedish, Danish, Norwegian, Japanese, Spanish, and Dutch languages. Application for use of the library should be made to the librarian, Professor Manning. The library room is Wilson 27; officers of the department are usually in Wilson 28 or Wilson 19 between 8 a.m. and 5 p.m.

THE LIBRARY OF THE DIVISION OF ENGINEERING comprises sixteen hundred and fifty bound periodicals, and fifteen hundred and thirty other books. All the important engineering periodicals are regularly received. Its rooms, on the second floor of the Engineering Building, are open from 8.30 a.m. to 12.30 p.m., and from 2 to 5 p.m., week days; on Saturdays from 8.30 a.m. to 1 p.m. It is supplemented by the Corthell Library already described.

THE LIBRARY OF THE DEPARTMENT OF GEOLOGY comprises more than three thousand volumes together with a large collection of charts and maps. The more important geologic, geographic, and mining periodicals are regularly re-

ceived. The library is contained in Rhode Island Hall, and is open from 9 a.m. to 5 p.m.

THE LIBRARY OF THE DEPARTMENT OF CHEMISTRY comprises about eleven hundred volumes, including sets of the leading chemical periodicals. The room is in Rogers Hall, and is accessible for use upon application made to the officers of the department.

OTHER DEPARTMENT LIBRARIES. There are several other special collections of books for seminary and advanced laboratory work. The most important of these belong to the departments of Astronomy, History, Philosophy, and Social and Political Science.

OTHER PROVIDENCE LIBRARIES

There are at the service of the students of the University the seven collections of books named below. These comprise, with the University Library, over six hundred and fifty thousand volumes, exclusive of pamphlets and manuscripts.

THE PROVIDENCE PUBLIC LIBRARY offers to all students of Brown University, upon the same conditions as to other residents of the city, the use of its collection of more than two hundred thousand volumes. About one thousand periodicals are currently received. The Information Desk may be consulted with reference to any department of University study. The library is situated at the corner of Washington and Greene Streets. Its principal rooms are open regularly from 9 a.m. to 9 p.m.; on Sundays, from 2 to 9 p.m.

THE LIBRARY OF THE PROVIDENCE ATHENAEUM is a collection of general literature numbering ninety-two thousand volumes. It receives over two hundred papers and magazines. It is especially rich in sets of periodicals and in books on art. Professors or teachers may become annual subscribers on the payment of four dollars in advance, and any duly accredited student of Brown University may become a subscriber for three months on the payment of one dollar; but the rights of such subscribers are personal only and do not extend to their families. The Athenaeum is open on week days, from 8.30 a.m. to 6.30 p.m.; on Saturdays from 8.30 a.m. to 9 p.m.

THE LIBRARY OF THE RHODE ISLAND HISTORICAL SOCIETY is situated on Waterman Street, next to the old University Library Building. It comprises forty thousand bound volumes, fifty thousand pamphlets, and two hundred thousand manuscripts, and by the courtesy of the society is accessible, free of charge, to members of the University. It is open on week days, from 9 a.m. to 4 p.m.

THE ANNMARY BROWN MEMORIAL, situated on Brown Street south of the University grounds, was founded by General Rush C. Hawkins, of New York, in memory of his wife, Annmary Brown, of Providence, a granddaughter of Nicholas Brown, after whom the University was named. It contains a col-

lection—one of the most complete in the world—of books from the first European presses showing the progress of printing through the first half century of its existence, from about 1450 to 1500. It contains also a notable collection of paintings. In connection with the Memorial, General Hawkins has provided for two lectures on “The Function of the Arts in Civilization,” to be given annually in Sayles Hall, on March 9 and October 28, the birthdays of his wife and her sister, Carrie Mathilde Brown Bajnotti.

THE LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY occupies a building of its own on Francis Street, opposite the State House. It comprises about twenty-five thousand volumes upon medical science, including current medical periodicals. Upon application students may, without cost, enjoy its privileges. The library is open on week days, from 9 a.m. to 5.30 p.m.; except on Saturdays, when it closes at 12 m.

THE STATE LAW LIBRARY is a collection of forty thousand volumes, and for certain lines of University study is invaluable. University students are requested to introduce themselves at the desk. The rooms of the library are in the Providence County Court House, at the corner of Benefit and College Streets, and are open on week days, from 9 a.m. to 5 p.m.; except on Saturdays, when they close at 3 p.m.

THE STATE LIBRARY, located in the State House, contains official documents of the United States and of the several states, and general works pertaining to history, political science, and social science. The Legislative Reference Bureau conducted by the State Library directs the work of students who are investigating topics in comparative legislation. The library is open to the public on week days, from 9 a.m. to 4 p.m.; except on Saturdays, when it closes at 12 m.

LABORATORIES

THE LADD ASTRONOMICAL OBSERVATORY contains an equipment available for illustrating the general courses in astronomy and for practical use in the applied courses. During the college year the Observatory is open to the public on one or more evenings a month.

THE PHYSICAL LABORATORY is in Wilson Hall, which was specially designed and constructed for the Department of Physics. Six laboratory rooms are available for experimental study. There is a large collection of apparatus and historical and other photographs, lantern-slides, and cage models illustrating the propositions in pure and applied physics.

THE CHEMICAL LABORATORIES are in Rogers Hall, which was erected expressly for the Department of Chemistry. The inorganic laboratory is supplied with

tables and lockers for about two hundred and fifty students. The organic laboratory is fitted with tables for about fifty students.

THE GEOLOGICAL LABORATORIES AND MUSEUM are in Rhode Island Hall. They are equipped with apparatus, photographs, maps, models, and illustrative specimens for work in general geology, geography, mineralogy, and petrography. The region in which the University is situated provides unusual opportunities in a small compass for the study of both simple and complex problems in field research in petrographic, metamorphic, paleontologic, and stratigraphic geology.

THE BIOLOGICAL LABORATORIES for subjects other than Botany are in the Arnold Biological Laboratory. In this building are separate laboratories for General Biology, Comparative Anatomy, Embryology and Histology, Physiology and Bacteriology; several special laboratories and research rooms; and the Biological Department Library. On account of close relations with the Providence Health Department, the Rhode Island Hospital, the Providence City Hospital, and the Rhode Island Shell-fish Commission, and on account of the location of Providence at the head of Narragansett Bay, the laboratory is peculiarly favored in the matter of material for study. The department has official connection with the Woods Hole Station of the United States Bureau of Fisheries and the Biological Laboratory at Cold Spring Harbor.

THE BOTANICAL LABORATORIES are in Maxcy Hall, on the first floor. There is also a greenhouse for experimental work adjoining the building. The Herbarium, in an adjoining room, is accessible to advanced students in forestry and medicinal and systematic botany.

The Botanical Garden is located about one mile north of the University, at the corner of Morris Avenue and Sessions Street. A part of the Garden is being developed into an arboretum. Another section is utilized for instruction in the growing of various kinds of coniferous and hardwood trees from seed and for experimental work on certain diseases peculiar to these trees.

THE PSYCHOLOGICAL LABORATORY occupies rooms on the first floor of Rhode Island Hall. The equipment suffices for class demonstrations, for the more usual forms of psychological investigation and training in methods, and for many forms of original research.

THE ENGINEERING LABORATORIES and drafting rooms are situated in the Engineering Building.

The materials laboratory contains 400,000-pound and 50,000-pound Riehle universal testing machines; a 50,000-inch-pound Olsen torsion testing machine; complete apparatus for making physical tests on cements and concretes, including two Riehle cement testing machines; and a collection of extensometers and other small apparatus necessary to the work of the laboratory.

The steam and gas engineering laboratory contains a 10-inch and 18-inch by 30-inch cross-compound condensing Harris-Corliss engine equipped with a Wheeler surface condenser and the necessary pumps, a 20-kilowatt De Laval turbo-generator set, a vertical Sturtevant steam engine direct connected to a 5-kilowatt generator, a 40-horse-power 4-cylinder Garford automobile engine, a 24-horse-power 3-cylinder Chase marine engine, an 8-horse-power Fairbanks horizontal gas engine, two air compressors, injectors, and miscellaneous smaller apparatus. The equipment also includes a manograph, indicators, transmission dynamometers, and other apparatus necessary for making complete tests. The central heating plant of the University, containing return tubular boilers of 450 boiler-horse-power capacity and a 110-horse-power Babcock and Wilcox water tube boiler, is used for tests and investigations. For such tests the department possesses apparatus for analyzing flue gas, pyrometers, steam calorimeters, etc.

The hydraulic laboratory contains a 1000-gallon Fales & Jenks rotary fire pump driven by the Harris-Corliss engine, a D'Auria steam pump, puisometer, Pelton wheel, Humphrey inward flow turbine, hydraulic ram, Venturi meters of different sizes, weirs and measuring tanks, together with the necessary auxiliary apparatus.

The equipment further includes an Emerson bomb calorimeter, jar mill, and complete apparatus for making proximate analyses of fuels; Macbeth illuminometer; equipment for testing lubricating and fuel oils, including Tagliabue viscosimeter; a complete metallurgical microscope; and polishing and photographic apparatus for investigating the nature and structures of alloys.

There is provided a complete equipment of apparatus necessary for the field work in surveying and railroad engineering. For the work in structural engineering a collection of over 400 photographs, 500 large blue prints of bridges, buildings, roof trusses, etc., and a set of steel structural shapes and iron beam-hangers, is provided.

The electrical laboratory is well equipped with the necessary motors, generators, measuring instruments, storage batteries, etc.

THE ENGINEERING SHOPS are situated in Rogers Hall. They are equipped with all the necessary tools for instruction in wood-working and metal-working, and with a forge and gas furnaces for exercise in tool dressing and in hardening, tempering, and heat-treating steel.

MUSEUMS

THE HERBARIUM is in Maxcy Hall. The general collection contains upwards of seventy-five thousand specimens from all parts of the world, but mainly from America. The cryptogams occupy ten cases and the seed-plants thirty. All of these are mounted and systematically arranged according to Engler and

Prantl's *Natürliche Pflanzenfamilien*. There are also several cases of unmounted specimens and duplicates. The genus *Carex* is particularly well represented, as it was the object of much special study by Colonel S. T. Olney, the founder of the Herbarium.

THE MUSEUM OF FINE ARTS occupies the first floor of Manning Hall. It contains plaster casts, chiefly from works of classical sculpture, illustrating ancient history, biography, and art. It also contains some original specimens of Etruscan, Graeco-Roman, and Oriental sculpture; the George W. Harris bequest of pictures by old masters of the Italian and North European schools, and of works in marble, china, glass, bronze, and silver; and a large painting by Tintoretto, the gift of Mrs. Charles Bradley and the late George L. Bradley. Certain works in silver and china, bequeathed to the University by George W. Harris, are temporarily loaned to the Rhode Island School of Design, and are on exhibition at the museum of that school.

The University possesses a large collection of valuable portraits, which are hung in Sayles Memorial Hall. It includes portraits of the University's principal benefactors, of many of its former officers, and of other distinguished persons, Americans and foreigners. The history of Rhode Island is especially well represented.

Some paintings, selected from the collections of the University, are exhibited in the gallery on the top floor of the John Hay Library.

A series of paintings illustrating early American history, by Frank O. Small, presented to the Department of History by Samuel M. Conant, is hung in the Faculty Room in the Administration Building.

All the collections are open to the public.

UNIVERSITY EXTENSION

THE University offers each semester extension courses, given at the University and open to all who desire to register. These courses are of two types.

Single Courses—each of ten lectures or lessons, given one each week—are designed primarily for the general public. Those, however, who wish to pursue these courses for University credit may register as students. At the close of each exercise the instructor will meet these students for discussions, assignment of work, review of work previously assigned, laboratory exercises, and other pertinent matters.

Double Courses—each of about fifteen lectures or lessons, given one each week with each session for a double period, or given two each week for ten weeks—are designed primarily for those who wish to pursue them for Uni-

versity credit. They furnish an opportunity for more intensive work and more rapid progress than the *single courses* do. Auditors also are admitted to these courses.

A *single course* is accepted by the University as the equivalent of a one-hour course for one semester; a *double course* is accepted as the equivalent of a two-hour course. Students desiring to count such courses for degrees must comply with the regulations concerning entrance requirements and prescribed courses. The University will issue certificates to students who have successfully completed extension courses for credit.

Applications for admission to extension courses should be sent to Professor Walter Ballou Jacobs, Director of University Extension, John Hay Library, Brown University. The application should give the full name and the address of the applicant, and the course or courses in which registration is desired. On receipt of the fee, a card of admission is issued which must be shown at the lectures in each course. Classes are not formed in any course for which fewer than twenty-five apply. The fee for single courses is three dollars and a half. For those who register for credit there will be an additional fee of one dollar and a half. This fee is due on registration and must be paid not later than the third lecture in each course. The fee for double courses is ten dollars. Auditors cards for double courses are issued for seven dollars. Checks should be made payable to Brown University. Fees should be sent with the application if possible; if not, payment may be made at the Comptroller's office, University Hall.

Courses offered during the first semester—November Series—1918-19, were:

‡ *English Composition*, Professor BENEDICT.

English Literature, Professor BRONSON.

Psychology—Testing Efficiency, Professor COLVIN.

‡ *Modern Social Studies*, Professor DEALEY.

The Middle East, Professor FOWLER.

‡ *Elementary Spanish*, Professor JOHNSON.

Books of the World War, Professor KOOPMAN.

Food for the Nation at War, Professor MITCHELL.

‡ *The Animal Kingdom*, Professor WALTER.

Accounting; Theory and Practice, Mr. GEORGE F. HAMILTON.

Economic Problems in the World War, Dr. ALVIN H. HANSEN.

French Conversation, M. EDOUARD R. MASSEY.

Sunday-School Organization and Instruction, Dr. MARION E. BRATCHER.

Courses offered during the second semester—February Series—1918-19, were:

‡ *English Composition*, Professor BENEDICT.

Social Needs of Rhode Island, Professor BUCKLIN.

‡ Double courses.

How to Learn, Professor COLVIN.

The Solar System, Professor CURRIER.

Chemistry in Daily Life, Professor DAVISON.

‡ *Modern Political Problems*, Professor DEALEY.

‡ *Elementary Spanish (two courses)*, Professor JOHNSON.

English Poems of the Nineteenth Century, Professor KOOPMAN.

United States and the Outside World, Professor SIOUSSAT.

Navigation, Professor SLOCUM.

‡ *The Backboned Animals*, Professor WALTER.

Electrical Engineering, Professor WATSON.

Sunday-School Teaching, Dr. MARION E. BRATCHER.

Business Statements, Mr. GEORGE F. HAMILTON.

French Conversation (two courses), M. EDOUARD R. MASSEY.

PROVISIONS FOR THE PERSONAL WELFARE OF THE STUDENTS

PHYSICAL TRAINING

FOR the physical training of the students excellent opportunities are offered by the Lyman Gymnasium. It is thoroughly equipped with baths, dressing-rooms, bowling alleys, and all kinds of apparatus usually found in modern gymnasiums. Connected with the gymnasium is the Colgate Hoyt Swimming Pool, seventy-five feet in length by twenty-five feet in width, with a capacity of seventy-five thousand gallons. All the gymnasium work is under the supervision of the Professor of Physical Training, who makes a thorough examination and measurement of each student on entrance, and at other times by request. Special cases are referred to the University Physician. Such exercises are prescribed as may be necessary to give health, strength, and symmetrical development. No student is allowed to attempt any feat which is likely to result in injury. From the close of the Thanksgiving recess to the beginning of the spring recess, all first and second year students are required to attend gymnasium exercises three times a week. For other members of the University voluntary classes are provided. The class work consists of setting-up exercises, developing exercises, calisthenics, the use of clubs, dumb-bells, wands, and single sticks, and general athletics. In all the work, the aim is to develop health, strength, and vitality.

During the periods before Thanksgiving and after the spring recess, or until such time as a satisfactory test is passed, swimming is required three hours a week of all Freshmen and of all other students who have not previously passed the test, unless excused by the University physician.

All branches of athletics are under the management of the Brown University Athletic Association, and are controlled by a board of undergraduates. The Faculty Committee on Student Organizations has general oversight of the deportment and scholarship of the members of the various teams. Lincoln Field adjoins the gymnasium, and is a convenient place of exercise for the class teams and the students in general. Andrews Field, which is a mile and a half from the University, offers the usual opportunities for all the University teams. The Marston Field House, the gift of Edgar L. Marston, is fitted with dressing-rooms, lockers, baths, and other accommodations.

MEDICAL CARE

Any student suffering from illness is expected at once to visit or summon the University Physician, Dr. Raymond G. Bugbee (223 Thayer Street. Office hours 2 to 4 p.m.; 7 to 8 p.m. Telephone Angell 2660-W.). When called to see

students at their rooms, the duty of the University Physician is to make one call for diagnosis and prescription at the expense of the University. For continued attendance, students make their own arrangements with Dr. Bugbee or some other physician. All office calls are at the expense of students.

The University owns two free beds in the Rhode Island Hospital, to the occupancy of which the President of the University has the right of appointment. The first of these, THE CHARLES SMITH BRADLEY FREE BED, was established in 1872 by the payment to the hospital of four thousand dollars by the late Judge Bradley, a member of the Board of Fellows, thereby endowing a free bed "under the control of the President of Brown University for the time being, for the benefit of any officer or student of that institution who may have occasion for it." The second, THE GEORGE IDE CHACE FREE BED, was established by the payment to the hospital of four thousand dollars by the late Professor George Ide Chace; this foundation gives to the President of the University "the right to nominate and send to said hospital a patient, being a proper subject for treatment in said hospital according to the rules of the institution."

A patient sent to the hospital in accordance with the above arrangements is entitled to occupy a bed in one of the wards, and to receive the usual care, medical, surgical, and other attendance, and medicines and board, free of charge; but if he occupies a separate room and is under the care of an outside physician, he will be expected to pay the hospital from sixteen to twenty-three dollars per week.

THE BROWN UNION

The chief aim of the Brown Union is to encourage a vigorous and healthy social life in the University, to bring undergraduates, Faculty, and Alumni into closer relation than would otherwise be possible, and to unite under one roof, with competent direction, the various activities of the students. Membership is open to Alumni and Faculty, and includes all of the undergraduates. The Board of Management consists of the President of the Union, who must be a member of the Senior class, and four members appointed by the Corporation. The Union occupies Rockefeller Hall, which is also the headquarters of the Brown Christian Association. The building contains offices for the Athletic Board, the musical and dramatic clubs, the *Daily Herald*, and the College Bookstore; rooms of various sizes for student meetings; and the usual conveniences of a social club, including large and handsomely furnished rooms for reading and lounging, an auditorium with a well-equipped stage, a dining-hall and lunch-room, a billiard room and a barber shop. In coöperation with the Christian Association, the Union gives entertainments on Tuesday evenings throughout the year, the programs including readings, musical or dramatic performances, and addresses of various sorts. The Secretary is George J. Heidt, A.B.

THE BROWN CHRISTIAN ASSOCIATION

The purpose of this Association is to unite all men who cherish Christian ideals in the service of their fellow-men. It welcomes to membership all men who are connected with the University. Among its activities are frequent meetings for the discussion of religious, philanthropic, vocational, and educational problems and for devotional purposes; the arrangement of conferences and interviews with visiting speakers; coöperation with the churches in religious and social work. It maintains an Information Bureau for new students at the beginning of the college year. All communications relative to the Association or to the Information Bureau should be addressed to George J. Heidt, A.B., General Secretary of the Association. His offices are on the lower floor of Rockefeller Hall. Rooms J, K, L, M, and N are specially designated for the various activities of the Association.

The University and the Christian Association coöperate in offering to the students the aid of the Employment Bureau in securing employment for undergraduates by business houses and residents of the city. Students desiring work of any kind should register with the Secretary, Mr. Heidt.

RELIGIOUS SERVICES

A chapel service is held in Sayles Hall every week day at 9 a.m. The President usually conducts the exercises. Attendance is required of undergraduates.

ARRANGEMENTS WITH OTHER INSTITUTIONS

THE RHODE ISLAND SCHOOL OF DESIGN

THE Rhode Island School of Design is an institution of large and increasing importance for the education of artisans and artists in the principles and processes of art, and for the general advancement of education in art by the exhibition of works of art and art studies, and by lectures. Its school buildings and museum are near the University grounds, and its collections are open daily to the public. Through its exhibitions there is opened to students an important means of culture.

The Corporation and Faculty of Brown University have agreed with the authorities of the Rhode Island School of Design upon a plan of coöperation in accordance with which certain courses at this School are open to students of the University and are counted towards a University degree. A description of these courses and a statement of the conditions under which they may be elected will be found in the list of courses given by the Department of Art, on pages 76, 77. Students from the Rhode Island School of Design are admitted to any classes in Brown University for which they are found to be prepared.

THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

In 1902 a number of the friends of the University, in recognition of the sixtieth anniversary of the graduation of the late Professor Harkness, one of the founders of the American School of Classical Studies at Athens, united in contributing to the School the sum of five thousand five hundred and fifty-five dollars, to establish a fund to be known as "The Albert Harkness Fund for the Benefit of Brown University." By the establishment of this fund, the privilege of free tuition in the School is secured for all adequately prepared graduates of the University. Any who desire detailed information regarding the School may obtain it by applying to Professor Poland or Professor Allinson, members of the Managing Committee of the School.

THE NEWTON THEOLOGICAL INSTITUTION

The Newton Theological Institution has entered into an agreement with Brown University whereby certain work done in the University, for which a mark of *C* has been awarded, or upon which the student passes an examination satisfactory to the Faculty of the Newton Theological Institution, will be credited toward graduation in the Theological course as follows: Biblical Literature and History 1, 2, 3, 4 (132 hours); 11, 12, 13, 14 (108 hours); 15, 16,

17, 18 (112 hours); English 11, 12 (33 hours),—in all, 385 hours. The total number of prescribed hours in the Theological course at the Newton Theological Institution is 1485.

THE TRAINING OF TEACHERS



ARRANGEMENTS WITH THE BOARD OF EDUCATION OF THE STATE OF RHODE ISLAND

THE Board of Education of the State of Rhode Island under act of the Legislature has entered into coöperation with Brown University for the professional instruction of college graduates who desire to become teachers in high schools, principals of high schools or elementary schools, or superintendents, and of those who already hold such positions. For this purpose the state appropriates annually five thousand dollars. A part of this sum is employed in maintaining graduate courses in Education. Part is expended in Scholarships in Education covering full tuition for a year of graduate work for the degree of Master of Arts. Scholarships are also granted for less than a full year of work. The courses must be approved by the head of the Department of Education. Appointment to these scholarships is made by the State Board of Education. Candidates must conform to the requirements for graduate students regularly fixed by the University.

ARRANGEMENTS WITH THE CITY OF PROVIDENCE

The School Committee of the City of Providence, by special agreement, appoints a number of student-teachers in the Providence High Schools. Appointments are made from Graduates of Brown University or of other institutions of equal rank, who have pursued undergraduate courses in Education. These student-teachers are of two types. Those of the first type—of whom there are at least four, two of each sex—are occupied in the schools each day for somewhat more than half the usual school session. They receive a salary of six hundred dollars a year from the city. Those of the second type teach and observe about five hours a week. They have considerably more freedom in the choice of subjects and of hours than those of the first type; they receive no remuneration from the city. An unusual opportunity is thus afforded students to gain at the same time a knowledge of the theory of education and experience in the art of teaching. In making appointments to places as regular teachers of the lowest grade in the Providence High Schools, preference is given to those who have successfully completed this course of training as student-teachers. In this respect student-teachers of the second type have the same status before

the Committee as those of the first type. The practice teaching in the Providence High Schools is done under the following Supervising Teachers :

Charles E. Dennis, Ph.D., *Latin*
Harriet P. Fuller, A.M., *Latin*
Clarence H. Manchester, A.M., *English*
Edith H. Williston, A.M., *French*
Richard O. Dummer, A.M., *Physics and Chemistry*
Alden E. Hodgkins, B.S., *Mathematics*
Franklin R. Cushman, A.M., *History*
Harold C. Newton, A.M., *English*
Eda M. Round, A.M., *Biology*

In a similar way a number of students are appointed to places in the Providence Grammar Schools. They receive a salary of five hundred dollars a year from the city. A limited number of Seniors and Graduates who are pursuing courses in Education are allowed to observe and teach in the Grammar Schools of the city in a way similar to that provided for student-teachers of the second type in the High Schools. Student-teachers are also assigned practice teaching in other schools in and near Providence.

UNIVERSITY FEES†

FOR THE ACADEMIC YEAR BEGINNING SEPTEMBER, 1920

TUITION. \$100 a semester; \$200 a year. This applies to all candidates for degrees, undergraduate or graduate, whether previously in residence or new students.

Special students (undergraduate or graduate) who are taking courses amounting to less than fifteen hours per week, will be charged in proportion to the actual amount taken.

GRADUATION FEES. For A.B., Ph.B., or Sc.B., \$10; for A.M. or Sc.M., \$15; for Ph.D. or D.P.H., \$25.

LABORATORY FEES. In addition to the fees mentioned above, charges are made for laboratory courses, covering the cost of ordinary supplies; special supplies and breakage are charged extra. Regular laboratory fees are as follows :

Biology : \$4.50 a semester for courses 1, 2; 3, 4; 5, 6; 7, 8; 9, 10; 12; 13, 14; 15, 16; 17, 18; 35, 36; 37, 38.

Botany : \$1.50 a semester for courses 1, 2; 20; \$4.50 a semester (for each three hours of credit) for courses 3, 4; 5, 6; 11, 12; 13, 14; fee for course 7, 8 depends upon the nature of the work taken.

Chemistry : \$4.50 a semester for course 1, 2; \$7.50 a semester for courses 3, 4; 5, 6; 7; 9; 10; 12; 13, 14; 32; \$7.50 a semester (for each three hours of credit) for courses 21, 22; 23, 24; 25, 26; 29, 30; \$12.50 for course 8 (for six hours of credit); \$3.75 for course 8a (for three hours of credit); \$2.50 a semester for courses 15, 16; 17, 18.

Electrical Engineering : \$2.50 a semester for courses 1; 2; 3; 9; 10.

Geology : \$1.50 a semester for courses 1; 4; 8; 15; \$3 a semester for courses 9, 10.

Mechanical Engineering : \$7.50 a semester for courses 1; 2.

Physics : \$6 a semester for courses 5, 6; 11, 12; 25, 26; \$4 a semester for course 21, 22; \$8 a semester for course 23, 24.

DEPOSIT. At the beginning of each semester all students occupying dormitory rooms or taking laboratory courses must, in addition to the payment of the above amounts, make a deposit of \$5 toward charges for light or breakage during that semester.

SPECIAL FEES. Candidates for a first degree who do not pay four years' full tuition fees must pay for all extra courses counted toward the degree at the rate of \$10 a semester for each three-hour course. This payment must be made

† For the year 1919-20 the fees will remain as stated in the Catalogue for 1918-19.

at the beginning of the semester in which the work for the degree is to be completed. This rule does not apply to courses credited on the basis of work done at other institutions or of examinations for advanced standing.

Candidates for the degree of Master of Arts or Master of Science who do not pay full tuition fees for one year, and candidates for the degree of Doctor of Philosophy who do not pay full tuition fees for two years, must pay for all extra courses counted toward the degree at the rate of \$10 a semester for each three-hour course. This payment must be made at the beginning of the semester in which the work for the degree is to be completed. This rule does not apply to courses credited on the basis of work done at other institutions or of examinations for advanced standing.

UNIVERSITY FEES

IN EFFECT FOR ALL STUDENTS FOR THE ACADEMIC YEAR BEGINNING
SEPTEMBER, 1921

TUITION. \$100 a semester; \$200 a year. This applies to all candidates for degrees, undergraduate or graduate, whether previously in residence or new students.

TOTAL PAYMENTS FOR DEGREES. All candidates for degrees (undergraduate or graduate) must pay the full amount regularly required for such degree; except that candidates receiving college credit on the basis of work done at other institutions, or of examinations for advanced standing will not be charged for work so credited.

EXTRA COURSES. Students taking extra courses, either to make up deficiencies, or as voluntary work, must pay extra tuition at the rate of \$10 per semester for each course so taken; except that students completing their degree work in less than the regular time must pay at the rate of \$20 per semester for extras counted toward their degree, so that their total payments shall not be less than the amount regularly required for the degree.

SPECIAL STUDENTS (undergraduate). Students taking only one or two courses must pay tuition at the rate of \$30 per semester for each course. Students taking more than two courses must pay the regular rate of \$20 per semester for each course.

GRADUATE STUDENTS. Students taking less than the regular amount must pay the regular rate of \$20 per semester for each course.

LABORATORY FEES. In addition to the fees mentioned above, charges are made for laboratory courses, covering the cost of ordinary supplies; special supplies and breakage are charged extra. Regular laboratory fees are as follows:

Biology: \$7 a semester for courses 1, 2; 3, 4; 5, 6; 7, 8; 9, 10; 12; 13, 14; 15, 16; 17, 18; 35, 36; 37, 38.

Botany: \$2.50 a semester for courses 1, 2; 20; \$7 a semester (for each three hours of credit) for courses 3, 4; 5, 6; 11, 12; 13, 14; fee for course 7, 8 depends upon the nature of the work taken.

Chemistry: \$7 a semester for course 1, 2; \$11 a semester for courses 3, 4; 5, 6; 7; 9; 10; 12; 13, 14; 32; \$11 a semester (for each three hours of credit) for courses 21, 22; 23, 24; 25, 26; 29, 30; \$19 for course 8 (for six hours of credit); \$6 for course 8 a (for three hours of credit); \$4 a semester for courses 15, 16; 17, 18.

Electrical Engineering: \$4 a semester for courses 1; 2; 3; 9; 10.

Geology: \$2.50 a semester for courses 1; 4; 8; 15; \$5 a semester for course 9, 10.

Mechanical Engineering: \$11 a semester for courses 1; 2.

Physics: \$9 a semester for courses 5, 6; 11, 12; 25, 26; \$6 a semester for course 21, 22; \$12 a semester for course 23, 24.

BACHELOR OF SCIENCE CANDIDATES. In addition to the regular tuition and the laboratory fees charged for specific courses a general fee of \$7.50 a semester will be charged to cover the extra expenses appertaining to engineering work.

SPECIAL EXAMINATIONS. A fee of \$3 will be charged for all special examinations.

ENTRANCE EXAMINATIONS. A registration fee of \$5 will be charged for entrance examinations; the payment to be credited on the bill for the first semester if the applicant is admitted.

DORMITORY RENTS. A new scale of prices will be charged for the academic year 1921-22 as stated in the lists given on pages 173-176.

DEPOSIT. At the beginning of each semester all students occupying dormitory rooms or taking laboratory courses must, in addition to the payments of the above amounts, make a deposit of \$5 toward charges for light or breakage during the semester.

DORMITORY ACCOMMODATIONS

IN the University dormitories there are one hundred and twenty-six single rooms and thirty-three suites. None of the rooms or suites are furnished. A table showing the rent and location of the dormitory rooms is printed below. The prices there given include rent, heat, and service for the college year, but not lighting; there is a meter for each room, and the occupants are charged for the amount of light used.

Each student renting a room must sign a contract therefor in the form given below, on which surety may be demanded, binding him to pay or cause to be paid the rent of the room through the entire year. Not more than two students are allowed regularly to occupy a room or suite. No sub-letting of rooms will be permitted. Where two students rent a room together, each must sign a contract for half the room expenses. This obligation is not impaired by the student's removal from the University, whatever the cause of such removal.

The following is a contract between Brown University, party of the first part, and the undersigned, party of the second part. I hereby engage room No. in ; the same not to be occupied by any other person without consent of the party of the first part; and I bind myself to pay or cause to be paid to the Registrar of Brown University the entire rent, including heat and service, amounting to \$ for the college year beginning September, 192

It is a part of this agreement that I shall be held responsible for all damage or defacement of such room, ordinary wear excepted; also that disuse of the room by me on account of illness, or in case registration is refused me owing to low standing or bad conduct, does not impair the obligation of this contract.

*Signed*_____

This day of 192 .

When the University holds full contracts for a room, the tenant or tenants may admit to the use of the room in the daytime one or two students, but not more than two. The names of any such sub-tenants must be reported to the Registrar as soon as the arrangement for sub-tenancy is made. For each sub-tenant the University makes an extra charge of \$1.50 a semester for service. This sum is paid by the tenant-in-chief, if there is but one; if there are two, each pays half.

All rooms not assigned for 1920-21 before May 7, 1920, will be disposed of at a drawing on May 21 at 4 p.m. Men intending to enter college in September can arrange to be represented at the drawing by notifying the Registrar in advance.

TABLE SHOWING RENT AND LOCATION OF DORMITORY ROOMS

HOPE COLLEGE

No.	Division	Floor	Windows face	Bedrooms	1920-21 Rent	1921-22 Rent
1	South	1	E. & S.	There are no separate bedrooms, but Nos. 1 and 2, 5 and 6, 9 and 10, 35 and 36, 39 and 40, 43 and 44, can be used either as suites or as single rooms.	\$136	\$164
2	"	"	W. & S.		142	170
3	"	"	W.		136	164
4	"	"	E.		133	160
5	"	2	E. & S.		136	164
6	"	"	W. & S.		142	170
7	"	"	W.		136	164
8	"	"	E.		133	160
9	"	3	E. & S.		127	152
10	"	"	W. & S.		133	160
11	"	"	W.		127	152
12	"	"	E.		121	146
13	"	4	E. & S.		121	146
14	"	"	W. & S.		127	152
15	"	"	W.		121	146
16	"	"	E.		118	142
17	Middle	1	E.		133	160
18	"	"	W.		136	164
19	"	"	W.		136	164
20	"	"	E.		133	160
21	"	2	E.		133	160
22	"	"	W.		136	164
23	"	"	W.		136	164
24	"	"	E.		133	160
25	"	3	E.		121	146
26	"	"	W.		127	152
27	"	"	W.		127	152
28	"	"	E.		121	146
29	"	4	E.		118	142
30	"	"	W.		121	146
31	"	"	W.		121	146
32	"	"	E.		118	142
33	North	1	E.		133	160
34	"	"	W.		136	164
35	"	"	W.		148	178
36	"	"	E.		148	178
37	"	2	E.		133	160
38	"	"	W.		136	164
39	"	"	W. & N.		148	178
40	"	"	E. & N.		148	178
41	"	3	E.		121	146
42	"	"	W.		127	152
43	"	"	W. & N.		136	164
44	"	"	E. & N.		136	164
45	"	4	E.		118	142
46	"	"	W.		121	146
47	"	"	W. & N.		127	152
48	"	"	E. & N.		127	152

BROWN UNIVERSITY

UNIVERSITY HALL

No.	Division	Floor	Windows face	Bedrooms	1920-21 Rent	1921-22 Rent
10	South	2	S. & W.	1	\$235	\$282
12	"	"	W.	<i>None</i>	125	150
13	"	"	W.	"	125	150
16	"	"	E.	"	110	132
17	"	"	E.	"	116	140
18	"	"	E. & S.	"	143	172
19	"	3	S. & W.	1	225	270
21	"	"	W.	<i>None</i>	122	146
22	"	"	W.	"	122	146
25	"	"	E.	"	110	132
26	"	"	E.	"	110	132
27	"	"	E. & S.	"	131	158
28	"	4	S. & W.	1	205	246
30	"	"	W.	<i>None</i>	110	132
31	"	"	W.	"	110	132
32	"	"	E.	"	107	128
33	"	"	E.	"	107	128
34	"	"	E. & S.	"	131	158
40	North	2	W.	"	125	150
41	"	"	W.	"	125	150
44	"	"	E. & N.	<i>None</i>	131	158
45	"	"	E.	"	116	140
46	"	"	E.	"	116	140
47	"	3	W.	"	116	140
48	"	"	W.	"	116	140
50	"	"	W. & N.	1	225	270
51	"	"	E. & N.	<i>None</i>	125	150
52	"	"	E.	"	110	132
53	"	"	E.	"	110	132
54	"	4	W.	"	110	132
55	"	"	W.	"	110	132
57	"	"	W. & N.	1	195	234
58	"	"	E. & N.	<i>None</i>	125	150
59	"	"	E.	"	107	128
60	"	"	E.	"	107	128

SLATER HALL

1	South	1	E. S. & W.	2	260.00	312
2	"	"	E. & W.	1	200.00	240
3	"	2	E. S. & W.	2	260.00	312
4	"	"	E. & W.	2	245.00	294
5	"	3	E. S. & W.	2	250.00	300
6	"	"	E. & W.	2	245.00	294
7	"	4	E. S. & W.	1	175.00	210
8, 9	"	"	W.	1	194.00	232
10	North	1	E. & W.	2	269.50	324
11	"	"	E. W. & N.	2	269.50	324

SLATER HALL (*continued*)

No.	Division	Floor	Windows face	Bedrooms	1920-21 Rent	1921-22 Rent
12	North	2	E. & W.	2	\$269.50	\$324
14	"	"	W. N. E.	2	286.00	344
15	"	3	W. & E.	2	264.00	316
17	"	"	W. N. E.	2	275.00	330
18, 19	"	4	E. & W.	1	206.80	248
20	"	"	W. N. E.	1	176.00	212

CASWELL HALL

1	North	1	E. N. & W.	1	375	450
2	"	"	E. & W.	1	350	420
3	"	2	E. N. & W.	2	375	450
4	"	"	E. & W.	2	350	420
5	"	3	E. N. & W.	2	375	450
6	"	"	E. & W.	2	350	420
7	"	4	E. & N.	None	195	234
8	"	"	W. & N.		195	234
9	"	"	W.	"	165	198
10	"	"	E.	"	165	198
11	Middle	1	"	"	175	210
12	"	"	W.	"	175	210
13	"	"	"	"	175	210
14	"	"	E.	"	175	210
15	"	2	"	"	185	222
16	"	2	W.	"	185	222
17	"	"	"	"	185	222
18	"	"	E.	"	185	222
19	"	3	"	"	185	222
20	"	"	W.	"	185	222
21	"	"	"	"	185	222
22	"	"	E.	"	185	222
23	"	4	"	"	165	198
24	"	"	W.	"	165	198
25	"	"	"	"	165	198
26	"	"	E.	"	165	198
27	South	1	E. & W.	1	350	420
28	"	1	E. S. & W.	1	375	450
29	"	2	E. & W.	2	350	420
30	"	"	E. S. & W.	2	375	450
31	"	3	E. & W.	2	350	420
32	"	"	E. S. & W.	2	375	450
33	"	4	E.	None	165	198
34	"	"	W.		165	198
35	"	"	W. & S.	"	195	234
36	"	"	E. & S.	"	195	234

BROWN UNIVERSITY

MAXCY HALL

<i>No.</i>	<i>Floor</i>	<i>Windows face</i>	<i>1920-21 Rent</i>	<i>1921-22 Rent</i>
319	3	W.	\$135	\$162
320	"	"	135	162
321	"	W. & N.	135	162
322	"	E. & N.	140	168
323	"	E.	140	168
324	"	"	140	168
425	4	"	140	168
426	"	"	140	168
427	"	E. & S.	140	168
428	"	W. & S.	135	162
429	"	W.	135	162
430	"	"	135	162
431	"	"	135	162
432	"	"	135	162
433	"	W. & N.	135	162
434	"	E. & N.	140	168
435	"	E.	140	168
436	"	"	140	168

DIRECTORY TO THE DORMITORIES

Hope College, South Division, Rooms 1 to 16.

Hope College, Middle Division, Rooms 17 to 32.

Hope College, North Division, Rooms 33 to 48.

Maxcy Hall, Rooms 319 to 436.

Slater Hall, South Division, Rooms 1 to 9.

Slater Hall, North Division, Rooms 10 to 20.

University Hall, South Division, Rooms 1 to 34.

University Hall, North Division, Rooms 35 to 61.

Caswell Hall, North Division, Rooms 1 to 10.

Caswell Hall, Middle Division, Rooms 11 to 26.

Caswell Hall, South Division, Rooms 27 to 36.

PAYMENT OF UNIVERSITY BILLS

BEFORE registration, at the beginning of each semester, every student must pay at the Comptroller's Office, the sum of twenty-five dollars on account of his bill for the semester.

As soon as possible after the beginning of each semester a complete bill will be sent to each student at his college address (unless otherwise requested), and students will be held responsible for college addresses as filed by them. This bill will include the semester charges for tuition, room rent, laboratory fees, and any special fees, including deposits, which may properly be charged. The twenty-five dollar payment made before registration and the amount of scholarship aid, if any, will be deducted. The net bill must be paid before 5 p.m. on the twentieth day of the semester. A student whose bill is not paid at this time will be dropped from the University.

Students who are employed in any capacity by the University must pay their bills without reference to the amount to be received for such service. Payment for service will be made by check at the middle and at the end of each semester.

Candidates for graduation in any year must pay all graduation fees with the bill for the second semester of that year.

ESTIMATE OF ANNUAL EXPENSES FOR 1920-21

The following is an approximate estimate of the annual expenses of a student who occupies a dormitory room (with a room-mate). It does not include the graduation fee of \$10 in the fourth year, nor outlay for clothes and traveling or other strictly personal expenses.

	<i>Lowest</i>	<i>Moderate</i>	<i>Liberal</i>
<i>Tuition</i>	\$200.00	\$200.00	\$200.00
<i>Room rent, including heat and service</i>	53.50	75.00	187.50
<i>Board (36 weeks)</i>	216.00	252.00	324.00
<i>Textbooks and laboratory expenses</i>	15.00	25.00	40.00
<i>Total</i>	<u>\$484.50</u>	<u>\$552.00</u>	<u>\$751.50</u>

Students who need to earn money find many opportunities for doing so in the city. See page 165.

FINANCIAL AID TO STUDENTS

THE aid which Brown University gives to students is of three kinds: awards from fellowship, scholarship, and aid funds; loans; payment in cash for services rendered. The awards from the scholarship and aid funds are made under the following conditions: an applicant must be of good moral

character; he must be in need of financial assistance; he must have been admitted without conditions to the Freshman class or to advanced standing, as a candidate for a degree. The scholarship or aid will be withdrawn from a recipient who is placed under college discipline or who fails to maintain creditable standing in his studies (a grade of *C* is expected).

The administration of the scholarship and aid funds is in the hands of a committee of the Faculty, annually appointed by the Corporation. Applications for scholarships for a given academic year should be filed with the Secretary of the Committee on Scholarships as soon as possible after May 1. The Committee will take action early in June on all applications received before June 1. Action on late applications is generally taken as soon as all the requisite information is received, but between August 15 and the opening of college no awards are to be expected. The President has charge of the administration of fellowships; service appointments are in charge of the Committee on Student Service.

FELLOWSHIP FUNDS

THE GRAND ARMY OF THE REPUBLIC FELLOWSHIP. The income of a fund of ten thousand dollars given by the Grand Army of the Republic, Department of Rhode Island, is annually awarded to a graduate of Brown University, of acknowledged excellence in scholarship and character. The recipient must be enrolled as a candidate for the degree of Doctor of Philosophy or have obtained that degree, must reside at Brown University, and must devote himself exclusively to advanced liberal study. Holders of the fellowship are appointed by the President of the University, subject to the approval of the Board of Fellows. Appointments to the fellowship are regularly made for one year, but incumbents of special diligence or ability may be reappointed. Descendants of Union Veterans of the Civil War are always to be preferred when the other qualifications of candidates are equal. The political or religious preferences of candidates cannot be taken into consideration. The President is authorized to make such other conditions not inconsistent with the above as he may from time to time deem wise and proper. Applications for this fellowship must be made in writing on blanks furnished by the Dean of the Graduate Department, and must be in the hands of the President not later than April 15. The Grand Army of the Republic Fellow for 1919-20 is

BENJAMIN MALCOLM HARRIS, A.M.

THE OLIVER CROMWELL GORTON ARNOLD BIOLOGICAL FELLOWSHIP. This is a fund of ten thousand dollars given by Dr. Oliver Henry Arnold in memory of his father. The income, or any part of it, is given annually according to the judgment and the discretion and under the direction of the President and the head of the Biological Department, for post-graduate work,

to any student, either male or female, of good character, who is a graduate of any collegiate institution of recognized standing and who has shown during his or her college course great diligence, talent, and marked ability in biological work. If in any year there should be more than one applicant for this fellowship, the President and the head of the Biological Department select a beneficiary from the results of a competitive examination as well as from the known ability of the student to conduct original research giving promise of a successful career. Should there be more than one candidate of exceptional merit, the income of this fund may be divided between two of them, but it may be given to one of them should it seem best to the President and the head of the Biological Department. In awarding this fellowship, other qualifications being equal, the candidate most in need of assistance will be selected. Should any beneficiary prove in any manner unworthy of assistance, it shall be discontinued, and should a beneficiary give evidence of great ability for conducting original research and a promise of large usefulness in his or her professional career, this income may be continued to him or her for one, two, or three years, according to the judgment of the President and the head of the Biological Department. Should the income of this fund, or any part of it, not be used in any year, the unused amount shall be set aside as a fund to be used in any succeeding year in assisting any student in post-graduate research work in the Biological Department who shall have all the qualifications mentioned in the preceding sections; or it may be used for any of the necessary and legitimate expenses for the advancement of research work in the Biological Department. The Arnold Fellow for 1919-20 is

JAMES WALTER WILSON, PH.B.

THE MORGAN EDWARDS FELLOWSHIP. This is a fund of ten thousand dollars given by the Philadelphia alumni of Brown University. Whenever the income from this fund shall amount to one thousand dollars it may be awarded by the President and Faculty of the University to an alumnus of not more than ten years' standing, for the pursuit of original research in any department of knowledge approved by the President and Faculty. The work may be carried on in any part of the world where it seems that the best facilities exist for the study of the subject selected. The award is to be made solely upon the ground of past merit and future promise. In exceptional circumstances the appointment may be continued for one or two additional periods of six months. Applications for consideration as candidates for this fellowship should be addressed to the President of the University, from whom further details may be obtained.

THE EMMA JOSEPHINE AYER ARNOLD ARCHAEOLOGICAL FELLOWSHIP. This is a fund of ten thousand dollars given by Dr. Oliver Henry Arnold in memory of his wife. It is primarily for the Women's College

(see page 239), but if no graduate of the Women's College fulfils the conditions, the income of this fund may be paid, with the consent of the Dean of the Women's College, for one year, to some male student fulfilling the conditions. The candidate must be approved by the President of the University and the professors of the Greek and Latin Departments. For 1919-20 this fellowship was awarded to

ADELE MADELEINE WILDES, A.B.

THE DU PONT FELLOWSHIP. The sum of seven hundred and fifty dollars given by E. I. du Pont de Nemours and Company, to be awarded for graduate research in chemistry. It is hoped that the fellowship will be continued from year to year. For 1919-20 this fellowship was awarded to

HENRY WEEDEN UNDERWOOD, JR., Sc.M., Ph.D.

TEACHING FELLOWSHIPS. In addition to the foregoing a number of Teaching Fellowships have been established, information regarding which will be furnished by the President.

SCHOLARSHIP AND AID FUNDS

FUNDED SCHOLARSHIPS. There are now seventy-seven scholarships of one thousand dollars, each yielding the beneficiary forty to fifty dollars annually. With the exceptions indicated below, they bear the names of their founders. The income is awarded annually according to the conditions attaching to each fund.

THE ELEVEN NICHOLAS BROWN SCHOLARSHIPS

THE FOUR UNIVERSITY SCHOLARSHIPS

THE PRESIDENT'S SCHOLARSHIP, founded by President Sears.

THE SIX ALVAH WOODS SCHOLARSHIPS

THE JAMES H. DUNCAN SCHOLARSHIP

THE ISAAC DAVIS SCHOLARSHIP

THE ARNOLD WHIPPLE SCHOLARSHIP, founded by Mrs. Arnold Whipple.

THE EPHRAIM WHEATON SCHOLARSHIP, founded by James Wheaton.

THE JOSEPH BROWN SCHOLARSHIP, founded by Mrs. E. B. Rogers.

THE GARDNER COLBY SCHOLARSHIP

THE CROCKER SCHOLARSHIP, founded by Robert H. Ives and Thomas P. Ives, Trustees.

THE CLARK SCHOLARSHIP, also founded by the Messrs. Ives.

THE GEORGE K. AND H. A. PEVEAR SCHOLARSHIP

THE JOSEPH CHARLES HARTSHORN SCHOLARSHIP

THE ROGERS HIGH SCHOOL SCHOLARSHIP, founded by William Sanford Rogers.

THE JAMES WHEATON SCHOLARSHIP

THE CHARLES THURBER SCHOLARSHIP

THE PARDON MILLER SCHOLARSHIP, founded by Mrs. Ann E. Miller.

THE HEZEKIAH S. CHASE SCHOLARSHIP

THE WILLIAM BUCKNELL SCHOLARSHIP

THE AUSTIN MERRICK SCHOLARSHIP, founded by Mrs. Olive E. Merrick.

THE HORATIO N. SLATER SCHOLARSHIP

THE EARL P. MASON SCHOLARSHIP

THE NEWPORT SCHOLARSHIP, founded by William Sanford Rogers.

THE ALEXIS CASWELL SCHOLARSHIP

THE THREE HENRY JACKSON SCHOLARSHIPS

THE MUMFORD SCHOLARSHIP, founded by Mrs. Louisa D. Mumford.

THE ALBERT DAY SCHOLARSHIP

THE HENRY P. KENT SCHOLARSHIP

THE ROMEO ELTON SCHOLARSHIP

THE LEWIS FAIRBROTHER SCHOLARSHIP, founded by Mrs. Lewis Fairbrother.

THE GEORGE LAWTON SCHOLARSHIP

THE JOHN P. CROZER SCHOLARSHIP, founded by Mrs. Margaret Bucknell.

THE JAMES Y. SMITH SCHOLARSHIP

THE TWO S. S. BRADFORD SCHOLARSHIPS

THE FRANCIS R. ARNOLD SCHOLARSHIP

THE CORNELIA E. GREEN SCHOLARSHIP

THE TWO HENRY CLIFFORD KNIGHT SCHOLARSHIPS, founded by Miss Amelia S. Knight, in memory of her brother, a member of the class of 1875.

THE THURSTON SCHOLARSHIP, founded by the Hon. Benjamin F. Thurston, of the class of 1849.

THE RUFUS BABCOCK SCHOLARSHIP, founded by Mrs. Caroline Vassar Babcock Jones, in memory of her father, the Rev. Rufus Babcock, of the class of 1821.

THE JAMES FLETCHER BLACKINTON SCHOLARSHIP, founded by Mrs. Mary D. Blackinton, in honor of her husband, James Fletcher Blackinton, of the class of 1847.

THE SAMUEL WHITE DUNCAN SCHOLARSHIP, founded by Mrs. Mary Duncan Harris.

THE FIVE WILLIAM A. WHITE SCHOLARSHIPS, founded by Mrs. Abby S. A. White, in honor of her husband, William A. White, of the class of 1857.

THE RICHARDS SCHOLARSHIP, founded by the Rev. William Coolidge Richards, of the class of 1837.

THE BENJAMIN HUTCHINSON JUDAH SCHOLARSHIP

THE S. DRYDEN PHELPS SCHOLARSHIP, founded by the Rev. S. Dryden Phelps, of the class of 1844, the income to be given each year to some student who is preparing for the Baptist ministry.

THE ELIOT LOOMIS COLLINS SCHOLARSHIP, founded by Clarkson A. Collins in memory of his son, Eliot Loomis Collins, of the class of 1910, "the income to be given each year to some member of the Junior class needing pecuniary aid, who may possess his characteristic qualities of earnestness of application, steadfastness of character, and cheerful personality."

THE E. BENJAMIN ANDREWS SCHOLARSHIP, founded by the class of 1898.

THE JOSIAH NELSON CUSHING SCHOLARSHIP, founded by Samuel H. Tingley in memory of the Rev. Josiah Nelson Cushing, D.D., of the class of 1862, for forty years missionary in Burmah.

THE LUTHER WHITE SCHOLARSHIP, founded by Mabel Adaline White, in memory of her father, the Hon. Luther White, of the class of 1864, "the income to be given to deserving students, to be selected by the college authorities, but preference to be given always to male and female descendants of the members of the class of 1864."

THE HENRY LYON SCHOLARSHIP, founded by William H. Lyon, of the class of 1868.

THE SCHOLARSHIP OF THE CLASS OF 1895.

THE CLASS OF 1905 SCHOLARSHIP, founded by the class of 1905, to be awarded to a student in the University "designated by a duly authorized committee of said class of 1905, subject to the approval of the President, or Acting President of Brown University."

THE LYMAN PARTRIDGE SCHOLARSHIP, founded by Herbert G. Partridge, M.D., in memory of his father, the Rev. Lyman Partridge, of the class of 1863, the income to be awarded to some promising young man, preference being given to a student coming from the Baptist church in one of the following places: Wakefield, R. I.; Sharon, Westminster, Westwood, Mass.

THE GEORGE W. BERRYMAN SCHOLARSHIP, the unrestricted legacy of George West Berryman, of the class of 1920, 2d Lieutenant, 167th Infantry, who was killed in action in France, July 16, 1918.

There are also the following scholarships of larger amounts:

THE TWO GEORGE J. SHERMAN SCHOLARSHIPS, paid from the income of a fund of twenty-five hundred and sixty-five dollars.

THE BARTLETT SCHOLARSHIP of four thousand dollars, founded by Mrs. Elizabeth Slater Bartlett; the income to be "devoted to the support of one or more students needing pecuniary aid, and giving promise, by studious aim and by character and scholarship, of rising to distinction and usefulness."

THE GLOVER SCHOLARSHIP of nearly ten thousand dollars, founded by Henry

R. Glover, "in memory of his father, Samuel Glover, of the class of 1808, and of his brother, Samuel Glover, Jr., of the class of 1839."

THE ANNIE E. WATERS SCHOLARSHIP of five thousand dollars.

THE REBECCA A. WHEELER SCHOLARSHIP of over sixteen hundred dollars; the income to assist some worthy student, preferably a candidate for the Baptist ministry.

THE SCHOLARSHIP OF THE CLASS OF 1838 of thirty-eight hundred dollars.

THE JOSEPH CHARLES HARTSHORN SCHOLARSHIP of two thousand dollars.

THE TWO BANIGAN SCHOLARSHIPS of three thousand dollars each, founded by Joseph Banigan, of Providence; the income as far as necessary to be used each year to defray the tuition of two students of the University.

THE GEORGE IDE CHACE SCHOLARSHIP of five thousand dollars, founded by Professor George Ide Chace, the income to be assigned each year by the Faculty to some member of the Senior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Senior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholarship for that year must be appropriated to the purchase of books for the Library of the University.

THE ABBY WHEATON CHACE SCHOLARSHIP of four thousand dollars, also founded by Professor George Ide Chace, the income to be assigned yearly by the Faculty to some member of the Junior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Junior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholarship for that year must be appropriated to the purchase of books for the Library of the University.

THE JOHN L. LINCOLN SCHOLARSHIP of twenty-five hundred dollars, founded by Abby G. Beckwith.

THE TRUMAN BECKWITH SCHOLARSHIP of twenty-five hundred dollars, founded by Abby G. Beckwith.

THE THAYER SCHOLARSHIP, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815; the income to be for the education of any young man or woman a resident of Uxbridge, Massachusetts, recommended by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

THE TWO WALTER G. WEBSTER SCHOLARSHIPS, founded by the Rev. Walter G. Webster, of the class of 1878; the income to go each year to two young men, members of the Freshman class, holding the full diploma of the Clas-

sical High School of the City of Providence and duly matriculated for the degree of Bachelor of Arts; "the nomination to rest with the Principal of said school, and to be made on the basis of character and scholarship, due regard being had to the need of such assistance."

THE S. W. MARSTON SCHOLARSHIP of five thousand dollars, founded in the name of his father by Edgar L. Marston. This scholarship is open to any graduate of William Jewell College who may be recommended by the President of that institution.

THE THREE E. L. MARSTON SCHOLARSHIPS of five thousand dollars each, founded by Edgar L. Marston. The first scholarship is open to any graduate of La Grange College who may be recommended by the President of that institution. The second and third are open to graduates of Baylor University under similar conditions.

THE EATON SCHOLARSHIP of two thousand dollars, founded in memory of her husband by Mrs. Caroline B. Eaton; the income to be used "in the aid of indigent Baptist young men having the ministry in view, preference being given to young men from New Hampshire."

THE ALEXANDER FARNUM SCHOLARSHIP of two thousand dollars, founded by the Rev. Augustus Woodbury; the income to be given to such student as the Faculty shall select, the primary condition being that such student shall have been prepared for college at Phillips Exeter Academy in Exeter, New Hampshire.

THE ALBERT HARKNESS SCHOLARSHIP of three thousand dollars, founded by Professor Albert Harkness; the income to be paid annually under the direction of the Faculty to some student of excellent character and high scholarship who shall be in need of pecuniary aid.

A FRIEND'S SCHOLARSHIP of five thousand dollars, founded by a friend of the University, the income to be awarded annually to some student in need of aid.

THE ELLEN READ NEWELL SCHOLARSHIP of three thousand dollars, founded by George W. Newell in memory of his wife; "the income to be expended (1) in behalf of some worthy graduate of the Pawtucket High School who may need financial help, (2) to such other meritorious student as the President or Faculty may designate."

THE FRED HOMER WILLIAMS SCHOLARSHIP of fifteen hundred dollars; the income to be awarded to some needy and worthy young man, preference being given to a graduate of the High School in Foxborough, Massachusetts.

THE GEORGE WOODLEY HOGG SCHOLARSHIP of five thousand dollars, in memory of George Woodley Hogg, of the class of 1894, the income to be awarded annually to either one or two students at the discretion of the Scholarship Committee, preferably, though not necessarily, to students residing in the State of Rhode Island.

THE DAVID W. HOYT SCHOLARSHIP of twenty-seven hundred dollars, founded by the Alumni Association of the Providence English High School; the income to go each year to some young man or woman designated by the Principal or the Acting Principal, for the time being, of the Providence English High School, subject to the approval of the President or the Acting President of Brown University.

THE JACOB SHARTENBERG SCHOLARSHIP, yielding the recipient one hundred and fifty dollars a year, founded by Jacob Shartenberg "to assist in paying the expenses of some deserving student in either the Sophomore, Junior or Senior class, . . . such student to be selected by the Faculty."

THE DYER-GURNEY-REED SCHOLARSHIP of two thousand dollars, founded by Charles F. Reed, of the class of 1885, the income to be awarded annually to (1) a male descendant of any member of the class of 1885; (2) a male student from the State of Massachusetts, preferably from Whitman, Abington, or Plymouth.

THE TWO SETH MANN SCHOLARSHIPS of twenty-five hundred dollars each, founded by Adelaide Elizabeth Mann, in memory of her father, Seth Mann, 2d, of the class of 1839.

AID FUNDS. There are eleven aid funds at the disposal of the University. The income of these funds is divided into scholarships of varying amounts, which are awarded under the general conditions applicable to all scholarships. They are as follows:

THE AARON LUCIUS ORDWAY MEMORIAL FUND of twenty-five hundred dollars, founded by Samuel H. Ordway in the name of his father, "the income to be used in the discretion of the President to assist regular students of the University who are in need of assistance. Each student who accepts such assistance shall in writing acknowledge the receipt of the same and pledge himself to repay the amount so received by him as soon as he can conveniently afford to do so, all sums so repaid to be added to the principal."

THE NANCY GOODNOW FUND of two thousand dollars, the income to be expended in assisting one or more students of the University who are preparing to be ministers of the Baptist denomination in the United States.

THE AID FUND, established by friends of the University in 1868 and now amounting to ninety-three hundred dollars.

THE DANIEL WANTON LYMAN FUND FOR STUDENTS, established by Daniel Wanton Lyman and now amounting to nearly seventy-five thousand dollars.

THE WILLIAM GROSBECK GODDARD MEMORIAL FUND of five thousand dollars, founded by Col. Robert H. I. Goddard in the name of his son, "the income to be used by the President or Acting President of the University, in his discretion, to aid young men without adequate means to obtain an education. Each beneficiary shall give a receipt for all money received, and shall

agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently."

THE EDWIN A. W. HARLOW FUND, founded by Edwin A. W. Harlow, now amounting to ten thousand four hundred dollars, the income to be "for assisting poor young men of excellent moral character in the Academic Department."

THE ROBERT H. HARLOW FUND of three thousand dollars, founded by Robert H. Harlow, the income to be "for assisting poor young men of excellent moral character in the Academic Department."

THE BENJAMIN BRAMAN FUND of one thousand dollars, the income to be granted annually to some worthy Christian student of limited means.

THE JAMES STANTON KENYON MEMORIAL FUND of three thousand dollars, founded by his daughters, Elizabeth Burrows Kenyon Wilkinson and Mary Stanton Kenyon, the income to be used to aid worthy young men of high personal character and of diligent application to their studies. Each beneficiary shall agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently, all sums so repaid to be added to the principal.

THE ROBERT JAMES YORKSTON MECKEL MEMORIAL FUND, founded by Miss Mary Wehmeyer, the income to be added to the principal until such time as the fund amounts to one thousand dollars. At that time "the income is to be used by the University in helping students who in the judgment of the President of the University may need assistance in carrying on their studies at Brown University."

THE WALTER S. HACKNEY FUND of three thousand dollars, founded by Walter S. Hackney, "the income thereof to be used by the President or Acting President of said University in his discretion to aid regular students of the University without adequate means to obtain an education. Each beneficiary shall give a receipt for all money received, and shall agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently, all sums so repaid to be added to the principal of said Fund."

UNIVERSITY SCHOLARSHIPS. In addition to the income of the Scholarship and Aid Funds, there have been established University scholarships, which are of three grades:

(1) A small number yielding each \$75 a semester or \$150 a year, awarded to a few students of especially high scholarship.

(2) A number yielding each \$50 a semester or \$100 a year.

(3) A number yielding each \$25 a semester or \$50 a year, used in part to supplement the smaller endowed scholarships, and also for those students needing relatively less assistance.

It is expected that the holders of these scholarships will regard them as in a certain sense loans, and will at some time after graduation return to the treasury the amount awarded, to be used for the increase of the permanent scholarship funds, or that they will in some other way contribute to the endowment of the University.

LOAN FUNDS

I. The Alumni Loan Fund, now amounting to about forty-three hundred dollars, was established by the Alumni Association at the Commencement of 1900 by a vote transferring to the Treasurer of the University the fund formerly known as the Brown Loyalty Fund, to be used as a loan fund for students. The principal of this fund is loaned at interest, to be repaid as agreed upon in each instance.

II. There is another fund, of several hundred dollars, which is loaned in small amounts without interest, for short periods, to students unexpectedly needing temporary assistance.

SERVICE

The University is able to give employment to a number of students as monitors, assistants in the libraries and laboratories, members of the choir, clerks in the Registrar's office, and so forth. Applications for employment of this kind should be filed with the Committee on Student Service. See also the statement concerning undergraduate employment, page 165.

PREMIUMS, PRIZES, AND HONORS

FOR EXCELLENCE IN UNIVERSITY STUDIES

THE WILLIAM GASTON SCHOLARSHIP. This fund of five thousand dollars was established in 1899 by the widow and children of the Hon. William Gaston, LL.D., of the class of 1840. Its income is awarded annually by the Faculty solely upon merit, without reference to financial condition. For 1919-20 this scholarship was awarded to

ROBERT BRUCE LINDSAY

THE GASTON PRIZE MEDAL FOR EXCELLENCE IN ORATORY. From the income of a fund of three thousand dollars established in 1894 as a memorial to the Hon. William Gaston, LL.D., of the class of 1840, a gold medal is annually awarded to the member of the graduating class who delivers the best original oration in English. The orations are not to exceed fifteen hundred words. In order to compete for the prize, a student must deposit with the Registrar a typewritten copy of his oration, signed with an assumed name, six weeks before the public competition. From these orations a committee appointed by the President of the University selects not more than six for delivery. The committee of award in the final contest consists of three members appointed by the President. In making the award, regard is given to thought, style, and delivery. The winner of the medal is entitled to deliver an oration at Commencement. In 1920 the orations must be deposited with the Registrar on or before March 24; the public competition will be held on May 18. In 1919 no award was made.

THE CARPENTER PREMIUMS, two in number, are derived from the income of funds established in 1867, one by Thomas Carpenter and one by Lydia Carpenter. They are assigned at the end of the Senior year to the two members of the Senior class who, "already on scholarships, shall, in the judgment of the Faculty, unite in the highest degree the three most important elements of success in life,—ability, character, and attainment." In 1919 these premiums were awarded to

JAMES SAVILLE EASTHAM *and* EUGENE WILLIAM O'BRIEN

THE HOWELL PREMIUM. The income of a fund amounting to one thousand dollars, presented to the University in 1867 by Gamaliel Lyman Dwight, is given at the close of the first semester of the Senior year to the student who, "having a good record of deportment, has the highest rank in Mathematics and Natural Philosophy." To be considered a candidate for the premium, a student must, in each semester from the beginning of the Freshman year to the end of the first semester of the Senior year, take at least one course

in one of the following subjects: Mathematics, Physics, Mechanics, Astronomy. In 1919 this premium was awarded to

EUGENE WILLIAM O'BRIEN

THE FOSTER PREMIUM IN GREEK is derived from the income of a fund of three thousand dollars bequeathed to the University in 1880 by the Hon. Lafayette Sabine Foster, of the class of 1828. In accordance with the terms of the donor's will, the income of this fund is to be "annually paid to that scholar of the institution who passes the best examination in the Greek language, the examination to be made in the first, third, and twenty-fourth books of Homer's *Iliad*, or in the *Oration on the Crown* by Demosthenes." The examinations are open to the members of the Senior class. The next examination will be held on Wednesday, May 5, 1920; candidates will be examined in the *Oration on the Crown*. In 1919 no premium was awarded.

THE LUCIUS LYON PREMIUMS IN LATIN are derived from the income of a fund of five thousand dollars presented to the University in 1893 by Mrs. Caroline L. Lyon, in memory of her husband, Lucius Lyon, of the class of 1844. Five-tenths of the income each year forms the first premium, three-tenths the second, and two-tenths the third. Any part of the income not needed in any given year must be added to the fund. The premiums are awarded on the basis of a special examination held during the second semester of the Senior year. In 1920 the examination will be held on May 19. The examination may relate to any or all of the following subjects: the Latin language, Roman literature, Roman history. The President of the University and the head of the department of Roman Literature and History prescribe the conditions for admission to the examination. In 1919 no premiums were awarded.

THE CLASS OF 1873 PRIZE. The income of a fund of one thousand dollars, presented to the University by the class of 1873, is awarded each year to that member of the Senior class who writes the best essay on a historical or a philosophical subject. The subjects, which are of a historical nature one year and of a philosophical nature the next, are assigned by the respective departments. In 1920 the essays must be deposited with the Registrar on or before June 1. For 1919-20 the subject is: *The Growth of the Idea of a League of Nations in Modern Times*. For 1918-19 the subject was: *The Moral Value of Military Training*. No prize was awarded.

THE BISHOP MCVICKAR PRIZES were founded by the late Rt. Rev. William N. McVickar, Bishop of the Protestant Episcopal Diocese of Rhode Island, and are continued by his sister, Miss E. C. McVickar. A first prize of fifty dollars and a second prize of twenty-five dollars are awarded for the best essays of from three to four thousand words on a subject assigned by the

department of Biblical Literature. The competition is open to undergraduate men who are, or have been, students in the department of Biblical Literature. Those who intend to compete must give their names to the head of the department not later than March 1, and the essays, under an assumed name, must be delivered to the Registrar not later than May 1. For 1919-20 the subject is: *The Principles of Jesus and Present Industrial Problems*. For 1918-19 the subject was: *The Old Testament and American Ideals of Government*. The prizes were awarded as follows.

The first prize to FRANCESCO CALI

The second prize to FRANK IRVING NOYES

THE SOCIETY OF COLONIAL DAMES PRIZE IN AMERICAN HISTORY. The income of a fund of fifteen hundred dollars, known as The Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906, is awarded each year as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use of authorities, and should, in general, extend to at least four thousand words. Those who intend to compete should give their names to the head of the department of History not later than March 1, and the essays, under an assumed name, must be delivered to the Registrar not later than May 14. The name of the successful competitor is announced at Commencement. For 1919-20 the subject is: *The Early Development of Shipbuilding on Narragansett Bay*. For 1918-19 the subject was: *The Charter of Rhode Island and Providence Plantations, 1663: An Account of its Origin*. The prize was awarded to

WALTER RICHMOND GARDNER

THE BENNETT PRIZE of twenty-five dollars was established in 1905 by Philo Sherman Bennett, for the best essay discussing the principles of free government. The essays of from three to six thousand words in length must be typewritten, signed with an assumed name, and deposited with the Registrar before 1 p.m. on Monday, April 22. The judges, three in number, are appointed by the President. For 1919-20 the subject is: *Is the Electoral College consonant with Democracy?* No prize was awarded in 1919.

THE CLASS OF 1880 PRIZES, established in 1905 by the class of 1880, are awarded each year to those undergraduates who show the most ability in presenting arguments on some current question of importance to the University. The subject for discussion, the time, and the manner of presentation are all determined by representatives of the English department in consultation with the president of the Debating Union and the editors-in-chief of the *Brunonian* and the *Brown Daily Herald*. The prizes are awarded by a board of

five judges: two are appointed by the President, two by the undergraduate members of the committee in charge; the fifth is a member of the English department.

In 1919-20 a first prize of thirty-five dollars and a second prize of twenty-five dollars will be awarded to the students who show the most ability in a public discussion of the subject. This discussion will be held on December 9; a preliminary discussion will be held on December 2. A first prize of twenty-five dollars and a second prize of fifteen dollars will be awarded to the writers of the best argumentative essays of from three thousand to five thousand words upon the same subject. The essays must be signed with an assumed name; they must be in the hands of the Registrar before 4 p.m., December 4. Either prize for the essay may be withheld if the judges deem it best. A student may enter both competitions. For 1919-20 the subject is: *Should Brown University debar Freshmen from all Varsity Athletic Teams?* For 1918-19 the subject was: *Should rushing and pledging for fraternities be postponed until the second semester?* No essay prizes were awarded. The prizes for the discussion were awarded as follows:

The first prize to WALTER MORRILL BURSE

The second prize to WALTER VINCENT MORIARTY

THE HICKS PRIZES FOR EXCELLENCE IN DEBATE, established by the Hon. Ratcliffe Hicks, of the class of 1864, are annually awarded as follows:

I. Two prizes of fifty dollars each, one for each of the two sets of representatives of the University in the intercollegiate debates. In each instance the prize is given to the man showing the greatest ability both in the preliminary trials and in the final trial. In awarding the prize, regard is given to thought, style, and delivery. The judges are at least three in number, appointed by the Debating Union. In 1919 these prizes were awarded to

WALTER MORRILL BURSE and ROGER TILLINGHAST CLAPP

II. A first prize of thirty dollars and two second prizes of twenty dollars to the students showing the greatest ability in a public debate between the representatives of the Junior and Sophomore classes. Each class is represented by three men, whom a committee appointed by the President of the University chooses from the preliminary contestants at least three weeks before the public debate. This committee also determines the subject and makes the necessary arrangements. The judges in the public debate are three, — one appointed by the President, and one by each group of competitors. The prizes are awarded irrespective of the decision upon the debate as a whole. Any one prize may be withheld if no one is adjudged to deserve it. In making the award, regard is given to thought, style, and delivery. In 1920 the

public debate will be held on May 11. In 1919 these prizes were awarded as follows :

The first prize to WALTER VINCENT MORIARTY

The second prizes to DONALD HASELTINE CURTIS
and EARL RANDOLPH STEPHENS

THE HICKS PRIZE IN ENGLISH, awarded at the end of the first semester of the Senior year to the student having the highest standing in the courses in English literature and language. In 1919 this prize was awarded to

HOWARD FRANKLIN SHAWCROSS

THE DUNN PREMIUM. The income of a fund of one thousand dollars, presented to the University in 1872 by pupils and friends of Professor Robinson Potter Dunn, is given, at the end of the Junior year, to the student having the highest standing in the courses in rhetoric, English composition, and public speaking. In making the award, regard is given to the number of such courses taken as well as to the rank attained in them. In 1919 this premium was awarded to

BRUCE NOEL COULTER

THE J. ACKERMAN COLES PRIZES. The income of a fund of one thousand dollars, presented to the University in 1907 by Dr. J. Ackerman Coles, is expended for prizes for the encouragement of intramural athletic sports.

THE CARPENTER PRIZES FOR ELOCUTION, derived from the income of a fund established in 1867 by Thomas Carpenter, are awarded each year to the three students to whom are assigned the first, the second, and the third rank of excellence in elocution. The competition is open to all members of the Sophomore class, and to those members of the Junior class who did not enter the preliminary competition in their Sophomore year. The selections declaimed may be either prose or verse. They must be approved by the Professor of Public Speaking, with whom competitors must enter their names not later than January 21. A preliminary contest for the purpose of selecting the speakers takes place in the early part of the second semester; all arrangements for it are in the hands of the Professor of Public Speaking. The committee of award consists of five members, — the Professor of Public Speaking, who is the chairman, two persons selected by the Corporation, and two persons selected by the Sophomore class; no one who is or has been a member of the class is eligible to membership in the committee. In 1920 the contest will be held in Manning Hall on April 20. In 1919 these prizes were awarded as follows :

The first prize to DONALD HASELTINE CURTIS

The second prize to RICHMOND LATHROP WATSON

The third prize to ABRAHAM LINCOLN BRISK

FOR EXCELLENCE IN PREPARATORY STUDIES

THE PRESIDENT'S PREMIUMS, derived from the income of a fund presented to the University in 1843 by President Wayland, are awarded each year to those members of the Freshman class who upon examination are found to excel in the studies required for admission to the University in Greek and Latin. First and Second Premiums are awarded in each of these studies. The examinations deal with the general principles and laws of the languages involved rather than with irregularities and exceptions. Special importance is attached to the pupil's familiarity with the subject-matter of the works read, and to his ability to translate with accuracy and facility into clear, appropriate, and idiomatic English. The examination in Greek is held in 5 Maxcy Hall at 2.30 p.m. on the second Wednesday of the first semester (October 1, 1919), and that in Latin in 1 Sayles Hall at 2.30 p.m. on the third Wednesday (October 8, 1919). The award of these premiums in 1919 was as follows:

In Greek the first premium to DANIEL VINCENT TROPPOLO, instructed in the Classical High School, Providence.

The second premium to LEROY WEEDEN HART, instructed in the Classical High School, Providence.

In Latin the first premium to DANIEL VINCENT TROPPOLO, instructed in the Classical High School, Providence.

The second premium in equal parts to FRANCIS JONES, instructed in the High School, Greenfield, Mass., and JOHN DAVIS EDMANDS JONES, JR., instructed in the Moses Brown School, Providence.

THE HARTSHORN PREMIUMS IN MATHEMATICS, derived from the income of a fund of one thousand dollars presented to the University in 1872 by Joseph Charles Hartshorn, of the class of 1841, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the mathematical studies required for admission to the University. The examination is held in 26 Wilson Hall at 2 p.m. on the fourth Wednesday of the first semester (October 15, 1919). The award of these premiums in 1919 was as follows:

The first premium to GUILLERMO ENRIQUE GONZÁLEZ, instructed in the Central High School of Porto Rico and the Moses Brown School, Providence.

The second premium to LEONARD PERKINS SAYLES, instructed in the Classical High School, Providence.

THE ENTRANCE PREMIUMS IN FRENCH, derived from the income of the President's Premium Fund, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the French studies required for admission to the University. The examination is held in

BROWN UNIVERSITY

1 Sayles Hall at 2 p.m. on the fifth Wednesday of the first semester (October 22, 1919). The award of these premiums in 1919 was as follows:

The first premium to EDWARD ALOYSIUS FONTAINE, instructed in the Classical High School, Providence.

The second premium to HAROLD LOMAS SUMMERFIELD, instructed in the Technical High School, Providence.

THE CAESAR MISCH ENTRANCE PREMIUMS IN GERMAN are awarded each year to the two members of the Freshman class who upon examination are found to excel in the German studies required for admission to the University. The examination is held in 5 Sayles Hall at 2 p.m. on the sixth Wednesday of the first semester (October 29, 1919). The award of these premiums in 1919 was as follows:

The first prize not awarded.

The second prize to FRANCIS JONES, instructed in the High School, Greenfield, Mass.

HONOR SCHOLARSHIPS

To encourage proficiency in studies and to provide recognition for successful application to college work, the Faculty has established Honor Scholarships without aid as follows:

THE JAMES MANNING SCHOLARSHIPS, awarded to those undergraduates whose work throughout the year has been of such excellence that they are deemed worthy of very high academic distinction. For 1918-19 these scholarships were awarded as follows:

Class of 1919

FRED BARTLETT PERKINS
ARTHUR GODFREY SELLEN

FRANCIS LLOYD SIMONS
CHARLES ARTHUR STUART

Class of 1920

WALTER RICHMOND GARDNER
ROBERT BRUCE LINDSAY

HAROLD AUGUSTUS PHELPS
RICHMOND LATHROP WATSON

CHAUNCEY DEPEW WENTWORTH

Class of 1921

LEON GOLDBERG

THOMAS CORCORAN GUNNING

EDWARD STANDISH PALMER

FRANCIS WAYLAND SCHOLARS

Class of 1919

FRANCESCO CALI

RUDOLPH JOHN CHAUNCEY FISHER

JACOB ISRAEL COHEN

HAROLD RAYMOND MOULTON

JAMES SAVILLE EASTHAM

ANTHONY JAMES RUSSO

Class of 1920

LE ROY WALTON BLACK

PAUL RUPERT GAST

FRANK DONALD BRIGHAM

SETH BRAYTON GIFFORD

ROGER TILLINGHAST CLAPP

JOHN WALTER HARRIMAN

IRVING AUGUSTINE FARRELL

LAWRENCE BENJAMIN HOWELL

SAMUEL SHEFELMAN

Class of 1922

PAUL MAYNARD CHALMERS

CLARENCE MANTON EDDY

WILLIAM CHACE GREENE, JR.

APPOINTMENTS FOR COMMENCEMENT

At Commencement three or four members of the graduating class deliver original orations in English of not more than fifteen hundred words each. One speaker is the winner of the Gaston medal; the others are appointed by the Faculty. The basis of selection is scholarship, ability to write, and ability to speak. In 1919 the speakers selected by the Faculty were:

THOMAS FRANCIS BLACK, JR.

RUDOLPH JOHN CHAUNCEY FISHER

FRED BARTLETT PERKINS

DEPARTMENT HONORS †

HONORS in any department are awarded, at the completion of the studies leading to a bachelor's degree, to those who have (1) taken a total of eighteen semester hours in the department, of which twelve hours have been of *A* grade and the other six not lower than *B* grade; (2) secured a mark of *A* or *B* in eighty-five per cent. of all their courses of study. In any department, however, certain specified courses may not be included in those counted for Final Honors. The names of all students awarded Department Honors are printed in the Commencement Program and in the Annual Catalogue. In 1919 the awards were as follows:

THOMAS FRANCIS BLACK, JR., *English*.EDWIN LAURINE BLEWER, JR., *Biology*.

† For students who entered in 1918 or thereafter a new system of Honors has been established. Department Honors will be discontinued after the class of 1921. See page 196.

BENJAMIN WILLIAMS BROWN, *English*.

FRANK LEWIS CHESLEY, *Geology*.

ALTON CHARLES CHICK, *Mechanical Engineering*.

JACOB ISRAEL COHEN, *Social and Political Science*.

FRANK EDMUND ECK, *Chemistry*.

RUDOLPH JOHN CHAUNCEY FISHER, *Biology*.

JOHN FRANCIS ISAAC, *Chemistry*.

FREDERICK ROLAND KROENER, *Mechanical Engineering*.

WILLIAM MOSS, *Chemistry, Germanic Languages and Literatures*.

EUGENE WILLIAM O'BRIEN, *Electrical Engineering, Mechanical Engineering*.

FRED BARTLETT PERKINS, *Social and Political Science*.

MANUEL GEORGE ROBINSON, *Mechanical Engineering*.

WILLIAM JOHN ROSS, *Mathematics*.

ANTHONY JAMES RUSSO, *Germanic Languages and Literatures, Romance Languages and Literatures*.

ARTHUR GODFREY SELLEN, *Biblical Literature and History, Philosophy*.

CHARLES BRENDEN SHAUGHNESSY, *Romance Languages and Literatures*.

HOWARD FRANKLIN SHAWCROSS, *English*.

FRANCIS LLOYD SIMONS, *Chemistry*.

LOUIS SMITH, *Chemistry*.

HAZEL ELSIE BLISS, *English*.

ESTHER ELIZABETH BRINTZENHOFF, *Chemistry*.

MARY ELIZABETH CARROLL, *Mathematics*.

EVELYN CHASE, *English*.

RUTH STORER GREEN, *Botany*.

HAZEL DADMUN HARTWELL, *Biology, Social and Political Science*.

RUTH HUNTINGTON, *Romance Languages and Literatures*.

RUTH CHACE LESTER, *Biology, Romance Languages and Literatures*.

MILDRED MORSE, *Art, Biology*.

MIRIAM FERN NUZUM, *Botany, Germanic Languages and Literatures*.

MAGEL CRAIG WILDER, *Biology*.

FRANCES WOODWORTH WRIGHT, *Mathematics, Romance Languages and Literatures*.

PRELIMINARY AND FINAL HONORS

A new system of Honors and Honors Courses has been established. The purpose is to stimulate more vital interest in scholarship, to offer students of marked ability and energy greater opportunity to carry on their work while in close association with one or more members of the Faculty, and to encourage them to measure their achievement in terms of breadth and depth of knowledge rather than in number of courses or of mere facts acquired. The

system will be administered by the Committee on Educational Advice and Direction.

Preliminary Honors of two grades will be awarded at the close of the Sophomore year to students whose work for the two years has been of an exceptional character. Final Honors of two grades will be awarded at graduation on the basis of a student's work in some chosen field of concentration. Honors Courses will be established in certain departments.

PRELIMINARY HONORS

Beginning with the class of 1922, two grades of these honors will be awarded to candidates for the degrees of A.B., Ph.B., and Sc.B.: *Preliminary Honors* to those whose grades contain (1) not less than forty per cent. *A*, (2) not less than eighty per cent. *A* and *B*, and (3) no failures; *Preliminary Highest Honors* to those whose grades contain (1) not less than sixty-five per cent. *A* and (2) one hundred per cent. *A* and *B*.

FINAL HONORS

Beginning with the class of 1922, two grades of Final Honors will be awarded. Candidacy for Final Honors will be open to those to whom Preliminary Honors or Preliminary Highest Honors have been awarded. Candidacy must be announced to the Committee on Educational Advice and Direction, and to the departments concerned, before registration for the Junior year. In exceptional cases admission to candidacy may be granted by the Committee to those who have not achieved either form of preliminary honors. Under special circumstances candidates may be admitted by the Committee at the beginning of the second semester of the Junior year. Every candidate must pursue with distinction at least five year courses in his field of concentration.

Final Honors will be offered only in departments in which at least one special course can be given to the student in each of the Junior and Senior years. These courses may be provided by either (1) additional assignments (in the form of conferences, reading, reports, or laboratory exercises) in connection with courses already offered, or (2) special *Honors Courses*, which will call for a quality and quantity of work greatly in excess of ordinary college courses. On recommendation of the department, the Committee may approve double credit for an Honors Course, thus allowing the student to obtain the regular year credit by carrying four courses only.

Candidates for honors (1) will be excused from the regular final examinations of the second semester of the Senior year in courses in their field of concentration, and (2) on recommendation of the departments concerned, will be excused from examinations in these courses at the end of the first semester of that year.

Before the end of the Senior year, every candidate for honors will be examined in the whole work of the field of concentration. This examination will consist of a written test of not less than four hours duration, and of an oral examination, conducted by a committee of the departments concerned. A thesis or report may also be required at the option of these departments. Students failing to maintain the proper standard in this examination will be given credit for their concentration work toward the degree, in accordance with the regular requirements for graduation.

The two grades of final honors awarded will be designated as *Honors* and *Highest Honors*; the latter will be reserved for men of exceptional performance and promise.

Recommendations for Honors and Highest Honors must have the written approval of the departments concerned and of the Committee on Educational Advice and Direction.

A special certificate will be awarded to students attaining Final Honors, and a list of such students will be printed on the Commencement program and in the University catalogue.

Candidates who are found not to be qualified for unusual achievement in the field chosen, or not to be taking advantage of the special opportunities offered, will be required to discontinue candidacy for honors at the close of any semester.

Candidates will be required to discontinue candidacy at the end of any semester in which they do not maintain an average *B* standing in courses outside their field of concentration.

DEGREES CONFERRED IN 1919

DEGREES IN COURSE

BACHELOR OF ARTS

Thomas Francis Black, Jr.
Benjamin Williams Brown
Joseph Butterworth, Jr.
Richard Elmer Edwin Campbell
Matthew Joseph Cummings, Jr. *With the class of 1918*
Ralph Edwin Dexter
James Saville Eastham
Frank Edmund Eck
William Henry Edwards
Oliver Wendell Robert Erickson
Charles Lawrence Evans
Rudolph John Chauncey Fisher
Sidney Albert Fox
John Williams Haley
William Horan Higgins. *With the class of 1918*
Lawrence Francis Hurley
Ronald McDonald Kimball. *With the class of 1918*

Helen Tucker Albro
Marietta Ellen Beehan
Alice May Bentley
Hazel Elsie Bliss
Esther Elizabeth Brintzenhoff
Caroline Elizabeth Capwell
Ruth Crawford Coombs
Novella May Eastman
Edith Lee Goff
Ruth Storer Green
Elizabeth Ellery Hammett
Hazel Dadmun Hartwell
Ruth Huntington
Marion West Johnson
Madeline Cecelia Keefe

Edgar Jewett Lanpher
James Lindley Palmer
William Elmer Parmenter
Charles Henry Peckham
Fred Bartlett Perkins
Edward Sefton Porter
John Brown Riddock. *With the class of 1918*
Hartley Forest Roberts
William John Ross
Charles Brenden Shaughnessy
Samuel Sanford Sheffield
William Herbert Sheldon, Jr.
James Cunningham Springer. *With the class of 1917*
Solomon Tannenbaum
James Johnson Walker
George Townsend Welch

Edna Ruth Macdonald
Mary Gladys Mahoney
Vashti Celestine Maxwell
Miriam Fern Nuzum
Theresa Elizabeth O'Brien
Mary Frances O'Rourke
Winifred Helen Olendorf
Ruth Dorothea Peterson
Edith Frances Smith
Mildred Josephine Smith
Ruth Sword
Florence Rose Thomae
Una Vestella Whipple
Magel Craig Wilder
Frances Woodworth Wright

BACHELOR OF PHILOSOPHY

- | | |
|---|--|
| Robert Johnson Ames. <i>With the class of 1918</i> | Harold Raymond Moulton |
| Arthur Elias Axt | Ralph Henry Mullane |
| Morris Bazar | Gordon Lancaster Parker. <i>With the class of 1918</i> |
| William Henry Beattie | Earl Moore Pearce. <i>With the class of 1917</i> |
| Edwin Laurine Blewer, Jr. <i>With the class of 1918</i> | Earle Arthur Phillips |
| Herman Joseph Borneman | David Fessenden Pierce |
| Francesco Cali | Marvin Whitman Ray |
| Frank Lewis Chesley | Waldo Whiting Robbins |
| Jacob Israel Cohen | Ralph Knickerbocker Rogers |
| Perry Edson Faunce | Anthony James Russo |
| George Harold Gildersleeve | Arthur Godfrey Sellen |
| Paul Francis Giles. <i>With the class of 1918</i> | Howard Franklin Shawcross |
| William Alfred Goggin | Francis Lloyd Simons. <i>With the class of 1918</i> |
| Thomas Watkins Hall. <i>With the class of 1918</i> | Louis Smith |
| Alexander Tulloch Hindmarsh | Samuel Watson Smith, 3d |
| Charles Henry Huggins, Jr. | Loue Eugene Stockwell |
| John Francis Isaac. <i>With the class of 1918</i> | Charles Arthur Stuart |
| Lawrence William Jordan | Alfred James Sullivan. <i>With the class of 1918</i> |
| Robert Augustus Lawder | Leslie Ray Taber. <i>With the class of 1917</i> |
| John Richard Leeming, Jr. <i>With the class of 1918</i> | Pierre Everett Teets |
| Howard Ripley McPeck | Samuel Temkin |
| Herbert Lindsey Manchester. <i>With the class of 1918</i> | Alton Stewart Thoren |
| Stanley Hopkins Mason | Thomas Carr Watson, Jr. |
| William Moss | Joshua Herbert Weeks |
| | Henry Harold Whitman |
| Mary Elizabeth Carroll | Helen Frances McAndrews |
| Evelyn Chase | Elsa Marguerite Metzger |
| Madrid Loretta Collette | Sophie Mogilevkin |
| Gladys Louise Crapo | Mildred Morse |
| Laurice Emilie Flagg | Miriam Prentice |
| Martha de Meritte Gage | Elizabeth Jemima Ross |
| Bessie Higgins | Ingeborg Mathilda Toll |
| Elaine Virginia Hildrup | Helen Jenks Vaughn |
| Hope Louise Humes | Edna Elizabeth Whitford |
| Ruth Chace Lester | |

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Harrison Albert Brown
 Stanley Ward Burlingame
 Alton Charles Chick
 Frederick Roland Kroener

David Ladd
 Manuel George Robinson
 Charles Oswald Ryon

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Robert Nathaniel Foote. *With the class of 1917*

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Harold Franklin Gibling	Eugene William O'Brien
Alfred Rounds Holden. <i>With the class of 1918</i>	George Rodger Sturtevant. <i>With the class of 1918</i>

MASTER OF ARTS

Francis James Brady, A.B.	John Francis Isaac
Michael Davitt Carroll, Sc.B.	Clarence Richard Johnson, A.B.
Herbert Winfield Chappell, A.B.	Marion Edna Knowles, Ph.B.
Blanche May Crapo, A.B.	Eduard Rose Massey, B. ès L.
Percy Raymond Crosby, Sc.B.	Helen Frances Ordway, A.B.
Elsie May Flint, A.B.	Dana Rice, A.B.
Adelbert Hayes Harrington, A.B.	Constance Brayton Rose, A.B.
Harvey Scott Hincks, Ph.B.	

MASTER OF SCIENCE

Zenas Randall Bliss, Ph.B.

DOCTOR OF PHILOSOPHY

Marjorie Weston Cook, A.B.

THESIS: "The Relation of the Intracellular Absorption of Antigen to the Production of Antibody."

Sven Gustav Hagglund, A.M., B.D.

THESIS: "The Social Factors in the New Testament, or the New Testament Aspect of Social Questions."

Henry Weeden Underwood, Jr., Ph.B., Sc.M.

THESIS: "The Action of Acetic Anhydride on Paraphenylenedipropionic Acid and the Influence of the Nitrogen Atom in the Quinoline Molecule upon the Formation of certain Carboxylic Acids of Quinoline and Quinaldine."

BROWN UNIVERSITY
DEGREES OUT OF COURSE

BACHELOR OF ARTS
WILLIAM ROBERT MORSE. *With the class of 1898*

HONORARY DEGREES

MASTER OF ARTS
HEZEKIAH ANTHONY DYER

DOCTOR OF DIVINITY
JOSEPH CHANDLER ROBBINS

DOCTOR OF LETTERS
WORTHINGTON CHAUNCEY FORD

DOCTOR OF LAWS
ENOCH HERBERT CROWDER
ERNEST MARTIN HOPKINS
DAVID FRANKLIN HOUSTON
ROSCOE POUND

UNIVERSITY OF ILLINOIS LIBRARY

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LIST OF STUDENTS

GRADUATES

- Clarence Raymond Adams *Eden Park*
A.B. (*Brown University*) 1918. Mathematics. Enrolled candidate for M.S.
- Abel Alexius Ahlquist *Providence*
A.B. (*Augustana College*) 1903 ; B.D. (*Augustana Theological Seminary*) 1909 ; A.M. (*Brown University*) 1916. Biblical Literature, Social Science. Enrolled candidate for Ph.D.
- Doris Dwinel Aldrich *Providence*
Ph.B. (*Brown University*) 1918. Social Science. Registered candidate for A.M.
- Richard Day Allen *Providence*
A.B. (*Brown University*) 1910 ; A.M. 1912. Education. Enrolled candidate for Ph.D.
- Ruth Linda Allen *Apponaug*
A.B. (*Wellesley College*) 1905. English. Enrolled candidate for A.M.
- Ida Elizabeth Arnold *Providence*
Ph.B. (*Brown University*) 1918. Education. Enrolled candidate for A.M.
- Arthur Elias Axt *Newark, N. J.*
Ph.B. (*Brown University*) 1919. Chemistry, Geology, Economics. Enrolled candidate for A.M.
- Mildred Evelyn Bassett *Greene*
A.B. (*Mount Holyoke College*) 1917. Education. Registered candidate for A.M.
- LeRoy Walton Black *Rutherford, N. J.*
Ph.B. (*Brown University*) 1920. Biology, Philosophy. Enrolled candidate for A.M.
- Harold Bradford Blanchard *Pawtucket*
A.B. (*Boston University*) 1914. Education. Registered candidate for A.M.
- Herman Joseph Borneman *College Point, N. Y.*
Ph.B. (*Brown University*) 1919. Education. Enrolled candidate for A.M.
- Kenneth Livingston Burdon *Providence*
Ph.B. (*Brown University*) 1918. Biology, Chemistry. Enrolled candidate for Sc.M.
- Charles Ernest Burr *Providence*
A.B. (*University of Rochester*) 1890. Biblical Literature. Registered candidate for A.M.
- Joseph Butterworth, Jr. *Fall River, Mass.*
A.B. (*Brown University*) 1919. English, Philosophy, Music. Enrolled candidate for A.M.
- Francesco Cali *Cesaro, Italy*
Ph.B. (*Brown University*) 1919. Biblical Literature, Social Science. Registered candidate for A.M.
- Richard Elmer Edwin Campbell *Providence*
A.B. (*Brown University*) 1919. Education. Enrolled candidate for A.M.
- Franklin Robert Cawl *Providence*
A.B. (*Columbia University*) 1914 ; A.M. 1917. Education. Registered candidate for Ph.D.
- Frank Lewis Chesley *Providence*
Ph.B. (*Brown University*) 1919. Geology, German, Chemistry. Enrolled candidate for A.M.
- Henry Everett Childs *Deerfield, Mass.*
Sc.B. (*University of Rochester*) 1916. Education, Biology. Registered candidate for Sc.M.
- Raymond Carpenter Colwell *Johnston*
A.B. (*Brown University*) 1913 ; Sc.M. 1915. Biology. Enrolled candidate for D.P.H.

- Percy Raymond Crosby *Pawtucket*
Sc.B. (*New Hampshire College*) 1912; A.M. (*Brown University*) 1919. Education, Mathematics. Registered candidate for Ph.D.
- Arthur Freeman Crowell *Providence*
A.B. (*Brown University*) 1899. Education, Mathematics. Enrolled candidate for A.M.
- Minot Joy Crowell *Melrose, Mass.*
Ph.B. (*Brown University*) 1915. Biology. Enrolled candidate for D.P.H.
- Peter Marshall Curry *Hamilton, Texas*
A.B. (*Baylor University*) 1918. Social Science, Philosophy. Enrolled candidate for A.M.
- Samuel Reed Damon *Kingston*
Ph.B. (*Brown University*) 1916; A.M. 1917. Biology. Registered candidate for Ph.D.
- Alice Dimick *Providence*
A.B. (*Wellesley College*) 1918. Biology, Chemistry. Enrolled candidate for Sc.M.
- George Ronello Dolloff *Natick*
A.B. (*Bates College*) 1915. Education. Registered candidate for A.M.
- Lillian Catherine Dow *Pawtucket*
Ph.B. (*Brown University*) 1918. History, English. Enrolled candidate for A.M.
- Arthur Justin Dows *Lowell, Mass.*
Ph.B. (*Brown University*) 1919. Education. Registered candidate for A.M.
- Myron Whitmarsh Finch *Providence*
Sc.B. (*Rhode Island State College*) 1914. Biology. Enrolled candidate for Sc.M. Registered candidate for Ph.D.
- Rudolph John Chauncey Fisher *New York, N. Y.*
A.B. (*Brown University*) 1919. Biology, Chemistry, Physics. Enrolled candidate for A.M.
- Margaret Ames Fuller *Providence*
A.B. (*Wellesley College*) 1911. Biology, Chemistry, English. Enrolled candidate for A.M.
- Sidney Russell Gair *Chicago, Ill.*
Ph.B. (*Brown University*) 1918. English, French. Registered candidate for A.M.
- Mary Amelia Gorman *Providence*
A.B. (*Brown University*) 1908. Education, Latin. Enrolled candidate for A.M.
- Samuel Marcus Gup *Mobile, Ala.*
B.H. (*Hebrew Union College*) 1913; A.B. (*Cincinnati*) 1914; A.M. 1915; Rabbi (*Hebrew Union College*) 1917. Biblical Literature. Registered candidate for Ph.D.
- James Lawrence Hanley *Providence*
A.B. (*Boston College*) 1919. Chemistry. Special graduate student.
- Adelbert Hayes Harrington *Pontiac*
A.B. (*Olivet College*) 1901; A.M. (*Brown University*) 1919. Social Science, Biblical Literature. Registered candidate for Ph.D.
- Benjamin Malcolm Harris *Arlington*
A.B. (*Brown University*) 1913; B.D. (*Newton Theological Institute*) 1916; A.M. (*University of Vermont*) 1918. Biblical Literature, Philosophy. Registered candidate for Ph.D.
- Marion Emsley Hawes *Providence*
Ph.B. (*Brown University*) 1912. Social Science, Chemistry, Philosophy. Enrolled candidate for A.M.
- Flora Mabel Hayes *Greenwood, Ind.*
A.B. (*Franklin College*) 1918. English. Enrolled candidate for A.M.
- Charlotte Haywood *Lynn, Mass.*
A.B. (*Mount Holyoke College*) 1919. Biology. Registered candidate for A.M.
- John Chester Herring *North Attleboro, Mass.*
A.B. (*Harvard University*) 1910. Education. Registered candidate for A.M.

- Bessie Higgins *Hastings-on-Hudson, N. Y.*
Ph.B. (*Brown University*) 1919. Biblical Literature, Philosophy, Economics. Enrolled candidate for A.M.
- Elaine Virginia Hildrup *Providence*
Ph.B. (*Brown University*) 1919. Philosophy, Social Science, Economics. Enrolled candidate for A.M.
- Harvey Scott Hincks *Providence*
Ph.B. (*Brown University*) 1918; A.M. 1919. Art. Registered candidate for Ph.D.
- James Beecher Hobbs *Bristol*
Ph.B. (*Brown University*) 1918. Education. Registered candidate for A.M.
- William Crosby Hobbs *Bristol*
A.B. (*Bates College*) 1881. Education. Special graduate student.
- Donald Everett Hosmer *Pawtucket*
A.B. (*Dartmouth College*) 1916. Education, French. Enrolled candidate for A.M.
- John T. Hubbard *Centrebroke, Ct.*
A.B. (*Beloit College*) 1912. Education. Registered candidate for A.M.
- Siji Cheving Hung *Shanghai, China*
Ph.B. (*Brown University*) 1917; A.M. 1918. Social Science. Enrolled candidate for Ph.D.
- Malcolm Cleveland Hylan *Medfield, Mass.*
Ph.B. (*Brown University*) 1918. Education, French, Chemistry. Enrolled candidate for A.M.
- Wendell Everett James *Providence*
A.B. (*Brown University*) 1919. Chemistry, Biology. Enrolled candidate for A.B. and Sc.M.
- Willis Hobron Jeffery *Providence*
Ph.B. (*Brown University*) 1917. Biology, Chemistry, Geology. Enrolled candidate for A.M.
- Mildred Mnemosyne King *Springfield, Mass.*
A.B. (*Mount Holyoke College*) 1913. Social Science. Registered candidate for A.M.
- Beatrice Florence Kohlberg *Barrington*
Ph.B. (*Brown University*) 1912. Education. Registered candidate for A.M.
- Carroll Burton Larrabee *Bradford, Pa.*
Ph.B. (*Brown University*) 1919. English. Enrolled candidate for A.M.
- Carl Oswald Lathrop *Providence*
A.B. (*Brown University*) 1917; Sc.M. 1918. Biology, Chemistry, Mathematics. Enrolled candidate for Ph.D.
- Robert Bruce Lindsay *New Bedford, Mass.*
A.B. (*Brown University*) 1920. Physics, Mathematics. Enrolled candidate for Sc.M.
- Elmer Albert Love *Liberty, Mo.*
A.B. (*William Jewell College*) 1919. Biblical Literature, Social Science. Registered candidate for A.M.
- Daniel Allan McPherson *Providence*
Ph.B. (*Brown University*) 1920. Chemistry, Biology. Enrolled candidate for Sc.M.
- Mary Gladys Mahoney *Providence*
A.B. (*Brown University*) 1919. Education. Registered candidate for A.M.
- Charles Delbert Maurer *East Sparta, Ohio*
Ph.B. (*Wooster College*) 1915; S.T.B. (*Boston University*) 1918; M.P.E. 1919. Philosophy. Registered candidate for Ph.D.
- Lorimer Douglas Milton *Washington, D. C.*
A.B. (*Brown University*) 1920. Economics, Education, Latin. Enrolled candidate for A.M.
- Clovis William Mitchell *Greenville*
Sc.B. (*Rhode Island State College*). Education. Registered candidate for A.M.

- Irving Calvary Mitchell *Valley Falls*
Sc.B. (*Rhode Island State College*) 1913. Education. Enrolled candidate for A.M.
- Mildred Morse *Woonsocket*
Ph.B. (*Brown University*) 1919. Greek, Art. Enrolled candidate for A.M.
- Sarah Ida Morse *Providence*
A.B. (*Brown University*) 1918. Art. Registered candidate for A.M.
- Helen Axtell Mowry *Woonsocket*
A.B. (*Brown University*) 1918. Botany. Enrolled candidate for A.M.
- Teresa Regina O'Donnell *Providence*
A.B. (*Trinity College*) 1919. Education. Enrolled candidate for A.M.
- Miriam Prentice *Providence*
Ph.B. (*Brown University*) 1919. Biology. Special graduate student.
- Marie Louise Russell Raps *Bristol*
A.B. (*University of Tennessee*) 1901. Education. Enrolled candidate for A.M.
- William Francis Redding *Meshanticut*
Sc.B. (*Rhode Island State College*) 1913. Physics, Romance Languages, Astronomy. Enrolled candidate for Sc.M.
- Dana Rice *Providence*
A.B. (*Brown University*) 1918; A.M. 1919. Greek, Art, Geology. Registered candidate for Ph.D.
- Cora Ethel Riley *Lawrence, Mass.*
A.B. (*Mount Holyoke College*) 1912. Education. Registered candidate for A.M.
- John Christiano da Rosa *Brava*
A.B. (*Brown University*) 1918; A.M. 1918. Social Science, Biblical Literature, Philosophy. Enrolled candidate for Ph.D.
- William John Ross *Providence*
A.B. (*Brown University*) 1919. Education. Enrolled candidate for A.M.
- Eda May Round *Providence*
Ph.B. (*Brown University*) 1897; A.M. 1899. Geology, Botany. Enrolled candidate for Ph.D.
- Arthur Ward Ruff *Pawtucket*
A.B. (*Yale University*) 1909. Education. Special graduate student.
- William Walker Russell *East Providence*
Ph.B. (*Brown University*) 1918. Chemistry, Physics. Enrolled candidate for Sc.M.
- Arthur Godfrey Sellen *Warren*
Ph.B. (*Brown University*) 1919. Philosophy, Biblical Literature, Social Science, French. Enrolled candidate for A.M.
- Howard Franklin Shawcross *Greystone*
Ph.B. (*Brown University*) 1919. English, History, Music. Enrolled candidate for A.M.
- Francis Lloyd Simons *Pawtucket*
Ph.B. (*Brown University*) 1919. Biology, Mathematics, Chemistry. Enrolled candidate for Sc.M.
- Rebecca Rogers Snow *Pittsburgh, Pa.*
Ph.B. (*Brown University*) 1916. Chemistry, Mathematics, Education. Enrolled candidate for A.M.
- William Timothy Spanton *Kingston*
Sc.B. and Sc.B in Agriculture; A.B. (*Ohio State College*) 1915. Education. Enrolled candidate for A.M.
- May Sperry *Oaklawn*
Ph.B. (*Brown University*) 1918. Mathematics. Enrolled candidate for A.M.

- Charles Arthur Stuart *Plattsburgh, N. Y.*
Ph.B. (*Brown University*) 1919. Biology, Chemistry, Physics. Enrolled candidate for Sc.M.
- Howard Wilson Tindall *Dutch Neck, N. J.*
Ph.B. (*Brown University*) 1919. Education. Enrolled candidate for A.M.
- Ingeborg Mathilde Toll *Manville*
Ph.B. (*Brown University*) 1919. Chemistry, Geology, Physics. Enrolled candidate for Sc.M.
- Oliver Henry Toothaker *Fairhaven, Mass.*
A.B. (*Bates College*) 1898. Education. Enrolled candidate for A.M.
- Payson Waite Tucker *Auburn*
Ph.B. (*Brown University*) 1913. Education. Enrolled candidate for A.M.
- Eleanor Stuart Upton *Providence*
A.B. (*Smith College*) 1909; A.M. (*Brown University*) 1910. History. Registered candidate for Ph.D.
- Raymond Melville Upton *Peabody, Mass.*
Sc.B. (*Massachusetts Agricultural College*). Education. Registered candidate for A.M.
- William Gould Vinal *Providence*
Sc.B. (*Harvard University*) 1906; A.M. 1907. Biology. Registered candidate for Ph.D.
- Benjamin Alpheus Ward, Jr. *Pawtucket*
Sc.B. (*Tufts College*) 1915. Education. Registered candidate for A.M.
- Leta Theresa Warnock *Eastport, Me.*
Sc.B. (*Boston University*) 1914. Chemistry, Biology. Enrolled candidate for Sc.M.
- Olive Collins White *Providence*
A.B. (*Brown University*) 1918. Education, Economics, Music. Enrolled candidate for A.M.
- Edward Tracy Whitney *New Bedford, Mass.*
A.B. (*Harvard University*) 1917. Biology. Enrolled candidate for A.M.
- Elizabeth Wave Whitman *South Attleboro, Mass.*
A.B. (*Brown University*) 1913. History. Registered candidate for A.M.
- Magel Craig Wilder *Thornton*
A.B. (*Brown University*) 1919; Biology. Registered candidate for A.M.
- Irene Hawes Williamson *Rumford*
Ph.B. (*Brown University*) 1912. Education. Enrolled candidate for A.M.
- James Walter Wilson *West Somerville, Mass.*
Ph.B. (*Brown University*) 1918. Biology. Registered candidate for Ph.D.
- Herbert Edward Wolfe *Mystic, Ct.*
A.B. (*Brown University*) 1912; A.M. 1913. Education. Registered candidate for Ph.D.
- Frances Woodworth Wright *Providence*
A.B. (*Brown University*) 1919. Mathematics, Economics. Enrolled candidate for A.M.

UNDERGRADUATES
WITH THE DEGREES FOR WHICH THEY ARE
REGISTERED

[A. = A.B. P. = PH.B. S. = SC.B.]

SENIORS : CLASS OF 1920

NAME		RESIDENCE
Charles Frederick Abbott	S	<i>Shrewsbury, Mass.</i>
Victor Freeman Adams	P	<i>Osterville, Mass.</i>
Alexander Addeo	S	<i>Providence</i>
Frank Alexander Ross Allen	P	<i>Pawtucket</i>
George Chester Ames	P	<i>Cortland, N. Y.</i>
Wilbur Reginald Anderson	P	<i>Meriden, Ct.</i>
Laurence Porter Atkins	P	<i>Detroit, Mich.</i>
Donald Miller Aumack	P	<i>Ballston Spa, N. Y.</i>
Henry Congdon Aylsworth	P	<i>Foster Centre</i>
Herbert Marston Bailey, Jr.	P	<i>Hackensack, N. J.</i>
Herbert Boutell Barlow	P	<i>Edgewood</i>
Edmund Francis Beagan	A	<i>Providence</i>
William Chester Beard	P	<i>Attleboro, Mass.</i>
Roland Dewey Beck	A	<i>Salem, N. J.</i>
Merrill Kelly Bennett	P	<i>Killingly, Ct.</i>
Russell William Besser	A	<i>Gilbertville, Mass.</i>
LeRoy Walton Black	P	<i>Rutherford, N. J.</i>
Robert Angell Bogle	P	<i>Fall River, Mass.</i>
George Wells Brace	P	<i>Dunkirk, N. Y.</i>
Frank Donald Brigham	P	<i>Beach Bluff, Mass.</i>
Abraham Lincoln Brisk	P	<i>Gardiner, Me.</i>
Morris Henry Brown	P	<i>Bridgewater, Mass.</i>
Stanton Albert Burdick	P	<i>Westerly</i>
Walter Morrill Burse	A	<i>Pittsfield, Me.</i>
Herbert Butterfield	P	<i>Providence</i>
John Robert Caldwell	A	<i>Fitchburg, Mass.</i>
Harold Aldrich Campbell	A	<i>Phenix</i>
Harley Frank Carey	P	<i>Laconia, N. H.</i>
Phillips Dean Carleton	A	<i>Providence</i>
Armand Laurier Caron	A	<i>Southbridge, Mass.</i>
Reuben Rogers Chase, Jr.	P	<i>Marion, Mass.</i>
Chester Wellington Chinn	P	<i>Riverside</i>
Raymond Eustace Claflin	A	<i>Lyme, N. H.</i>
Ernest Taylor Clough	P	<i>Portland, Me.</i>
Harry Francis Coleman	S	<i>Providence</i>

NAME		RESIDENCE
Rodney Esten Cook	P	<i>Woonsocket</i>
Bruce Noel Coulter	P	<i>Bridgeport, Ct.</i>
James Howard Covell	E	<i>LeRoy, N. Y.</i>
Irving Smith Crompton	S	<i>Providence</i>
William Judson Crouch	P	<i>Louisville, Ky.</i>
George Toomey Curry	S	<i>Providence</i>
Donald Haseltine Curtis	P	<i>Fairfield, Me.</i>
Paul Whitman Davis	A	<i>Providence</i>
James Quayle Dealey, Jr.	A	<i>Providence</i>
Clark Howard Denison	P	<i>Moosup, Ct.</i>
William Lewis Dewart, Jr.	P	<i>Sunbury, Pa.</i>
Stanley Milburn Dore	S	<i>Edgewood</i>
John Dorin	P	<i>New Haven, Ct.</i>
Wallace Broga Kelham Dove	P	<i>Providence</i>
Willis Bates Downey	A	<i>Hingham Centre, Mass.</i>
Clyde Lester Driscoll	A	<i>Livermore Falls, Me.</i>
William Grosvenor Ely, Jr.	P	<i>Schenectady, N. Y.</i>
Irving Augustine Farrell	A	<i>Central Falls</i>
Marshall Nairne Fulton	P	<i>Keokuk, Iowa</i>
Walter Richmond Gardner	A	<i>Providence</i>
Paul Rupert Gast	P	<i>New Bedford, Mass.</i>
Seth Brayton Gifford	P	<i>Adamsville</i>
Beale Mitchell Gordon	P	<i>Providence</i>
Maurice Isaac Green	P	<i>Bath, Me.</i>
Ray Woodville Greene, Jr.	P	<i>Worcester, Mass.</i>
George Washington Grimm, Jr.	P	<i>East Orange, N. J.</i>
Frank Charles Haddleton	P	<i>Providence</i>
Dutee Jerald Hall	A	<i>Westerly</i>
Ronald Prescott Hall	P	<i>North Attleboro, Mass.</i>
Raymond Halliday	A	<i>East Providence</i>
John Walter Harriman	P	<i>Providence</i>
Henry George Harris	P	<i>New York, N. Y.</i>
Samuel Mills Harris	P	<i>New York, N. Y.</i>
Samuel Heller	A	<i>Providence</i>
Allen Douglass Hill	A	<i>Syracuse, N. Y.</i>
Seaverns Winthrop Hilton	P	<i>Providence</i>
Harold Gardiner Hood	P	<i>Somerset, Mass.</i>
Richard Armington Hopkins	A	<i>Ludlow, Vt.</i>
Walter Hoving	P	<i>New York, N. Y.</i>
Edward Howell, Jr.	P	<i>Morris Plains, N. J.</i>
Lawrence Benjamin Howell	P	<i>Morristown, N. J.</i>
Raymond Maverich Hunter	P	<i>Des Moines, Iowa</i>
Donald Washburn Hurd	S	<i>Westbrook, Me.</i>

NAME		RESIDENCE
Donald Rice Hylan	P	<i>Medfield, Mass.</i>
Eric Pearson Jackson	A	<i>Fall River, Mass.</i>
Manuel James Jemail	P	<i>Newport</i>
Ernest Ashley Jenckes	A	<i>Providence</i>
James Lawrence Jenks, Jr.	A	<i>Pawtucket</i>
Louis Edwin Jones	P	<i>Norwood, Ohio</i>
Morrill Phillips Josselyn	A	<i>Bridgewater, Mass.</i>
Elmer Stackhouse King, Jr.	P	<i>Netcong, N. J.</i>
Robert Albert Kingsley	A	<i>South Berwick, Me.</i>
Russell Adrian Lane	P	<i>Baltimore, Md.</i>
Chauncy Taft Langdon	A	<i>Providence</i>
Leo Paul Lanigan	S	<i>Danbury, Ct.</i>
Carroll Burton Larrabee	P	<i>Bradford, Pa.</i>
Frederic William Lathrop	A	<i>Shelton, Ct.</i>
Herman Albert Lawson	P	<i>Newport</i>
Charles Hamilton Lawton, Jr.	P	<i>Pawtucket</i>
Kuo-Hao Lin	P	<i>Chinhai, China</i>
Robert Bruce Lindsay	A	<i>New Bedford, Mass.</i>
Arnold Elias Lindstrom	P	<i>Jamestown, N. Y.</i>
Walter Bartlett Lister	P	<i>Twinsburg, Ohio</i>
Harold Spencer Litchfield	P	<i>Auburn</i>
Henry Newman Lonergan	P	<i>Pawtucket</i>
Harold William Lord	P	<i>Pawtucket</i>
Clifton Norman Lovenberg	P	<i>Providence</i>
Albert Edgar Lownes	P	<i>Providence</i>
George Stanislaus McCormick	P	<i>Providence</i>
Alan Nicholson McDougall	P	<i>Yonkers, N. Y.</i>
John Alexander McGhee, Jr.	A	<i>Providence</i>
Walter Raymond McGinn	A	<i>Providence</i>
Thomas Aloysius McGuire	A	<i>Whitinsville, Mass.</i>
Daniel Allan MacPherson	P	<i>Providence</i>
William Michael McSweeney	P	<i>Springfield, Mass.</i>
George Samuel Magee	A	<i>Providence</i>
Vernon Charles Manley	A	<i>Ludlow, Vt.</i>
Samuel John Mann	P	<i>Pavilion, N. Y.</i>
Harold Estes Marr	P	<i>Fall River, Mass.</i>
Frank Thorman Meyer	P	<i>Jamestown, N. Y.</i>
Donald Gordon Millar	A	<i>Westwood, N. J.</i>
Lorimer Douglas Milton	A	<i>Washington, D. C.</i>
Bradford Van Rensselaar Moore	P	<i>Monticello, Ill.</i>
Walter Vincent Moriarty	P	<i>Providence</i>
Edwin Michael Murphy	P	<i>Lynn, Mass.</i>
Leonard Killian Murphy	S	<i>Acushnet, Mass.</i>

NAME		RESIDENCE
Waldon Charles Nason	S	<i>Providence</i>
Philip Ezra Newhall	A	<i>Cumberland Mills, Me.</i>
Elbert Perkins Nichols	P	<i>Stepney Depot, Ct.</i>
Ralph Hall Nichols	P	<i>Davisville</i>
Harry Norcross	P	<i>Lakewood, N. J.</i>
Harry Clark North	P	<i>Plattsburgh, N. Y.</i>
Frank Irving Noyes	A	<i>Haverhill, Mass.</i>
John Champlin Noyes	P	<i>Norwich, Ct.</i>
Evariste Orteig	P	<i>New York, N. Y.</i>
Benton Bradley Orwig	P	<i>Napoleon, Ohio</i>
Frederick Holroyd Paulson	S	<i>Thornton</i>
Reginald Marcy Pease	S	<i>Providence</i>
James Anthony Peirce	P	<i>Providence</i>
Harold Augustus Phelps	A	<i>Fitchburg, Mass.</i>
Charles Reginald Phillips	P	<i>New Haven, Ct.</i>
Louis Arthur Raymond Pieri	P	<i>Franklin, Mass.</i>
George Otto Podrasnik	P	<i>Riverside, Ill.</i>
Richard Valentine Ratigan	A	<i>Providence</i>
George Henry Rhodes	P	<i>Providence</i>
Wilbur Lamprey Rice	P	<i>Providence</i>
Anthony Romano	A	<i>Providence</i>
William Francis Rooney	S	<i>East Norwich, N. Y.</i>
Henry Tritton Samson	P	<i>New York, N. Y.</i>
Ernest Frank Santangini	S	<i>Providence</i>
Fred Emil Schoeneweiss	A	<i>Poughkeepsie, N. Y.</i>
Donald Scholefield Shaw	P	<i>New York, N. Y.</i>
William Desmond Shay	A	<i>Fall River, Mass.</i>
William Francis Sheehan	P	<i>Chateaugay, N. Y.</i>
Samuel Shefelman	P	<i>Brooklyn, N. Y.</i>
James Sinclair	P	<i>New York, N. Y.</i>
Edward Wilson Smith	S	<i>Westerly</i>
Joseph Smith	A	<i>Providence</i>
Laurence Richards Smith	P	<i>Wethersfield, Ct.</i>
Dwight Spencer	A	<i>Colorado Springs, Col.</i>
Earl Randolph Stephens	P	<i>Salysersville, Ky.</i>
Edward Bloodgood Stringham, Jr.	P	<i>Hopewell Junction, N. Y.</i>
John Baker Tasker, Jr.	P	<i>Hillsboro, N. H.</i>
Abraham Thomas	P	<i>Providence</i>
Frederic Allen Thompson	P	<i>Pawtucket</i>
Howard Wilson Tindall	P	<i>Dutch Neck, N. J.</i>
Albert Joseph Tracy	P	<i>Uxbridge, Mass.</i>
Elton Hammond Tucker	P	<i>Providence</i>
Thomas Francis Vance, Jr.	P	<i>Pawtucket</i>

BROWN UNIVERSITY

NAME		RESIDENCE
Edward James Walsh	A	<i>Providence</i>
Stanley George Warner	P	<i>Peterboro, N. H.</i>
Byron Adams Waterman	P	<i>Warren</i>
Richmond Lathrop Watson	P	<i>Auburn, Me.</i>
Cecil Alexander Watt	P	<i>Laconia, N. H.</i>
Chauncey Depew Wentworth	A	<i>North Baldwin, Me.</i>
Raymond Brooks West	P	<i>Fall River, Mass.</i>
Harvey Abbott Whipple	A	<i>Providence</i>
Stanley Patterson Whipple	A	<i>Providence</i>
Maynard Pressley White	S	<i>New York, N. Y.</i>
Daniel Everett Whitford	A	<i>Phenix</i>
Raymond Louis Wilder	P	<i>Palmer, Mass.</i>
Webb Westcott Wilder	S	<i>Thornton</i>
Walter Fish Wolfe	S	<i>Mystic, Ct.</i>
Elmer Stuart Woodward	P	<i>Rockland, Mass.</i>
Lloyd Parker Zellers	P	<i>Worcester, Mass.</i>
Frank Jacob Zitserman	A	<i>Providence</i>

JUNIORS: CLASS OF 1921

Preston Ober Abbott	A	<i>St. Louis, Mo.</i>
Forbes Sampson Adam	P	<i>Canaan, Ct.</i>
George Henry Adams	P	<i>Lakewood, N. J.</i>
Granville Burns Affleck	P	<i>Yonkers, N. Y.</i>
John Wilmot Albright	P	<i>Rahway, N. J.</i>
Robert Freeman Allison	P	<i>St. Johnsburry, Vt.</i>
Tracy William Ames	P	<i>New London, Ct.</i>
Charles Victor Andersen	P	<i>Framingham, Mass.</i>
Elmer George Armstrong	P	<i>Rahway, N. J.</i>
George Reginald Ashbey	A	<i>Norwich, Ct.</i>
Robert Reed Baldrige	P	<i>McKeesport, Pa.</i>
John Gardner Beagan	P	<i>Providence</i>
George Bichwit	P	<i>Providence</i>
Mars Paul Bishop	P	<i>Chicago, Ill.</i>
Carl August Bjorklund	P	<i>Hingham, Mass.</i>
Stanley Thayer Black	P	<i>Pawtucket</i>
Philip Pearce Borden	P	<i>Portsmouth, N. H.</i>
Harry Nickles Boreau	S	<i>Moorestown, N. J.</i>
Paul Theodore Brady, Jr.	A	<i>Palisade, N. J.</i>
James Edward Breslin	P	<i>Providence</i>
Howard George Brewer	S	<i>Cromwell, Ct.</i>
William Thomas Brightman, Jr.	S	<i>Dighton, Mass.</i>
Harry Turner Broadbent	S	<i>Providence</i>

NAME		RESIDENCE
Alfred Colvin Brooks	P	<i>Rahway, N. J.</i>
Earle Milton Brown	P	<i>Valley Falls</i>
Frederick Gregory Brown	A	<i>Newburgh, N. Y.</i>
Malcolm Christopher Brown	A	<i>Gouverneur, N. Y.</i>
William Robert Buerhaus	A	<i>Edgewood</i>
Thomas Francis Burke	P	<i>Pawtucket</i>
Gordon Franklin Burr	A	<i>Providence</i>
Theodore Huggins Bush	P	<i>Malden, Mass.</i>
Floyd Warren Buswell	A	<i>Providence</i>
Caesar Thomas Cambio	P	<i>Providence</i>
Michael Cantor	S	<i>Holyoke, Mass.</i>
Arthur Silvio Caputi	S	<i>Providence</i>
Louis Edwin Card	A	<i>Narragansett Pier</i>
George Henry Carr	P	<i>South Canterbury, Ct.</i>
John William Chapman	P	<i>Providence</i>
Sidney Stuart Cline	P	<i>Amenia, N. Y.</i>
Edgar George Cochrane	P	<i>Providence</i>
Daniel Wilcox Coggeshall	P	<i>Bristol</i>
Charles Leo Cohen	P	<i>Providence</i>
Morris Louis Cohen	A	<i>Providence</i>
Allan Bretterg Colby	S	<i>Fair Haven, N. J.</i>
Frederick Seth Collins	A	<i>Great Barrington, Mass.</i>
Hugh John Connelly	A	<i>Providence</i>
Richard Henry Coolidge	S	<i>Hartford, Ct.</i>
Lawrence Mark Corcoran	P	<i>West Springfield, Mass.</i>
Walter Freeman Crawford	P	<i>Pawtucket</i>
William Henry Crawford	P	<i>Bridgeport, Ct.</i>
Robert Bindloss Cruise	S	<i>New London, Ct.</i>
John Joseph Anthony Csepely	S	<i>Providence</i>
Christie Elston Cuddeback	P	<i>New York, N. Y.</i>
Charles Emerson Davis	P	<i>Edgewood</i>
Samuel La Due Davis	P	<i>Poughkeepsie, N. Y.</i>
Wesley Lawrence Dedrick	P	<i>Providence</i>
Michael De Filippis	P	<i>Milford, Mass.</i>
Robert Kellam Dewey	S	<i>New London, Ct.</i>
Vladimir Triphon Dimitroff	P	<i>North Scituate</i>
Harold Alpheus Dodge	P	<i>Westbrook, Me.</i>
John Robert Dorer	P	<i>Irrington, N. J.</i>
Carlton Le Roy Dunham	P	<i>Plainfield, N. J.</i>
Harold Gibbs Eastman	P	<i>Hartford, Ct.</i>
Charles Brayton Eddy	P	<i>Providence</i>
Nathan Willis Edson, 2d	P	<i>Lynn, Mass.</i>
Lloyd Clute Ely	P	<i>Schenectady, N. Y.</i>

NAME		RESIDENCE
Harold Richard Espey	P	<i>New York, N. Y.</i>
George Paul Farrell	A	<i>Pawtucket</i>
Harold Adam Faulkner	P	<i>East Providence</i>
Wayne Moody Faunce	S	<i>Providence</i>
Charles John Fish	P	<i>South Swansea, Mass.</i>
William Joseph FitzGibbon	P	<i>New York, N. Y.</i>
Lawrence Rogers Foote	P	<i>Pawtucket</i>
Harry Alexander Forman	S	<i>Brooklyn, N. Y.</i>
Stuart Forstall	P	<i>Montclair, N. J.</i>
Delbert Orrison Fuller	P	<i>Liberty, Me.</i>
Henry Ezra Gallup	P	<i>Danielson, Ct.</i>
Lawrence Outhit Gates	P	<i>Boston, Mass.</i>
Henry George Gilbert	P	<i>Danielson, Ct.</i>
David Duncan Gilchrist, Jr.	S	<i>Summit, N. J.</i>
Paul Abraham Gipfel	A	<i>Newark, N. J.</i>
Arcadia Giura	A	<i>New Bedford, Mass.</i>
Leon Goldberg	A	<i>Providence</i>
Mark Augustine Golrick, Jr.	S	<i>Providence</i>
Frank Oswald Green	A	<i>Pawtucket</i>
Flint Grinnell	P	<i>Norwood, Mass.</i>
Thomas Corcoran Gunning	A	<i>Fall River, Mass.</i>
Abram Evan Gwynne	P	<i>New York, N. Y.</i>
William Worth Hall	P	<i>Providence</i>
Herbert Leonard Hambleton	P	<i>Goffstown, N. H.</i>
Elmer Raymond Hering	P	<i>Hackensack, N. J.</i>
Paul Herriott	A	<i>Chicago, Ill.</i>
Frederick Weston Hoffman	S	<i>Pawtucket</i>
Frank Joseph Honan	P	<i>Providence</i>
Everett Van Ransalaer Hood	P	<i>Providence</i>
Fred Lorin Itschner	S	<i>Waterbury, Ct.</i>
Newton Jefferson Jackson	P	<i>Dorchester, Mass.</i>
Roger Peirce Jenks	P	<i>Middleboro, Mass.</i>
Kenneth Dewey Johnson	A	<i>East Milton, Mass.</i>
Russell Phillips Jones	A	<i>Edgewood</i>
Edward Roscoe Kent	S	<i>Providence</i>
Reginald Stevens Kimball	A	<i>Newport</i>
Ralph Chase Knight	S	<i>Newburyport, Mass.</i>
Edward Milton Kolman	P	<i>Providence</i>
Russell Ernest Larkin	P	<i>Georgetown, Mass.</i>
Walter Berger Leonard	P	<i>Providence</i>
Fred Alton Lougee	S	<i>St. Johnsbury, Vt.</i>
Frank Cartin Lynch	P	<i>Somerset, Mass.</i>
Herbert Elden MacCombie	A	<i>Stoughton, Mass.</i>

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NAME		RESIDENCE
Benjamin William McKendall	P	<i>Providence</i>
Robert Charles McKenney	P	<i>Trenton, N. J.</i>
George Kenneth Macdonald	P	<i>East Providence</i>
Bentley Mackintosh	P	<i>Sharon, Mass.</i>
Ernest Stuart Macmillan	P	<i>Pawtucket</i>
George Peabody Macready, Jr.	A	<i>Providence</i>
Harold Einar Magnuson	P	<i>Pontiac</i>
Joseph Berakat Makanna	P	<i>Bangor, Me.</i>
Herbert Harold Marks	A	<i>Providence</i>
Vincent Millard Meserve	S	<i>Cranston</i>
Coe Stanley Mills	S	<i>Sussex, N. J.</i>
Harold Chester Mills	P	<i>Pawtucket</i>
Elbridge Alden Minard	P	<i>Dorchester, Mass.</i>
Alfred Mochau	A	<i>East Hartford, Ct.</i>
John Joseph Muccio	P	<i>Lymanville</i>
Joel Martin Nichols, Jr.	P	<i>Attleboro, Mass.</i>
Mark Alvin Nickerson	S	<i>Pawtucket</i>
Henry William Edgar Noll	A	<i>Providence</i>
Robert Gale Noyes	A	<i>Norwich, Ct.</i>
Edward Gerard O'Connor	A	<i>Providence</i>
Olof Gustaf Oden	P	<i>Providence</i>
Edward Standish Palmer	P	<i>Providence</i>
Raymond Ellsworth Palmer	P	<i>Pawtucket</i>
Frederick Roger Paty	P	<i>Plymouth, Mass.</i>
Henry Wilfred Peterson	P	<i>Quincy, Mass.</i>
Edward Judson Phelps	P	<i>Rockland, Mass.</i>
Maurice Mitchell Pike	A	<i>Providence</i>
Daniel Rogers Pinkham	P	<i>Lynn, Mass.</i>
Arthur Allen Richards	P	<i>Swansea, Mass.</i>
Harrison Delano Ricketson	P	<i>New Bedford, Mass.</i>
Gordon Wolcott Roaf	S	<i>Newburyport, Mass.</i>
Hugh Robertson	P	<i>East Milton, Mass.</i>
William Bowman Robinson	A	<i>Providence</i>
Milton Harold Rusby	P	<i>Fall River, Mass.</i>
Edward Bertie Ryder, Jr.	S	<i>Plainfield, N. J.</i>
Jonas Sallet	P	<i>Attleboro, Mass.</i>
Seneca Gadsden Samson	P	<i>New York, N. Y.</i>
James Chester Scott	P	<i>Jeffersonville, Pa.</i>
Harold Lincoln Sheldon	S	<i>Phenix</i>
Abraham Israel Shulman	S	<i>Providence</i>
Harold Stanton Smith	P	<i>Needham, Mass.</i>
Norman Britton Sowell	P	<i>Moorestown, N. J.</i>
Myles Standish	P	<i>Providence</i>

NAME		RESIDENCE
Ralph De Lille Standish	P	<i>Hanover, Ct.</i>
Howard Bucknell Stearns	A	<i>Providence</i>
George Alfred Steinhoff	A	<i>Providence</i>
Preston Tapley Stephenson	P	<i>Lynn, Mass.</i>
John Randolph Stevens	P	<i>Providence</i>
Raymond Somers Stites	P	<i>Providence</i>
Henry Newell Sunderland	P	<i>Fall River, Mass.</i>
Everett Leprilete Sweet	P	<i>Providence</i>
Alfred Cecil Taylor	P	<i>Providence</i>
Edwin Lewis Thornton	P	<i>Pawtucket</i>
Harold Lauren Tinker	A	<i>Nashua, N. H.</i>
William Anthony Towle, Jr.	P	<i>Newburyport, Mass.</i>
Maynard Jones Wartman	P	<i>Tilton, N. H.</i>
Gaston Maurice Weinstein	P	<i>New York, N. Y.</i>
Robert Joseph Welsh	P	<i>Eaton, Ohio</i>
Herbert Alexander West	P	<i>Hopkinton, Mass.</i>
John Josiah White	P	<i>Atlantic City, N. J.</i>
William Walter Wilcox, Jr.	A	<i>Walden, N. Y.</i>
Jay Mayo Williams	P	<i>Monmouth, Ill.</i>
Knowlton Mead Woodin	P	<i>Auburn, Me.</i>
Elmer Parker Wright	P	<i>Auburn</i>
Woodworth Wright	P	<i>Providence</i>
Harold Ballard Yeaton	P	<i>Darien, Ct.</i>
Howell Thomas Young	A	<i>Providence</i>
Peter Paul Zubrisky	P	<i>Providence</i>

SOPHOMORES : CLASS OF 1922

Richard Warren Allen	S	<i>Wickford</i>
Robert Alden Appleton	P	<i>Pawtucket</i>
Frederic Kenneth Armstrong	S	<i>Yantic, Ct.</i>
Ernest Ludlow Bainton	S	<i>Providence</i>
Warren Edward Baker	P	<i>Providence</i>
Robert Knight Bard	P	<i>Brooklyn, Ct.</i>
Milton Marcus Bates	P	<i>Lynn, Mass.</i>
Fred Baurenfeind	S	<i>Glen Head, N. Y.</i>
Joseph Edward Beagan	P	<i>Providence</i>
Walter Putnam Berryman	P	<i>Westbrook, Me.</i>
Francis Crane Bidwell	P	<i>Norwich, Ct.</i>
Arthur Edwin Bjorklund	P	<i>Hingham, Mass.</i>
William Brayton Irving Blake	P	<i>Wollaston, Mass.</i>
James Robert Bland	S	<i>Brooklyn, N. Y.</i>
Paul Bernard Blocher, Jr.	P	<i>Jersey City, N. J.</i>

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NAME		RESIDENCE
Israel Bloom	P	<i>Providence</i>
Leo Edward Bonoff	P	<i>Madison, Ct.</i>
Francis Elmer Booth	P	<i>Cornwall, N. Y.</i>
Douglas Pierson Boyd	P	<i>Lee, Mass.</i>
Frederick William Brack	P	<i>South Norwalk, Ct.</i>
William Henry Bromage	P	<i>Thompsonville, Ct.</i>
Kendrick Benjamin Brown	P	<i>Naugatuck, Ct.</i>
Philip Meader Brown	A	<i>Providence</i>
Roland Daniel Brown	S	<i>Colchester, Ct.</i>
Ralph Sawyer Brown	P	<i>Brookline, Mass.</i>
William Linton Bulkeley	P	<i>Danbury, Ct.</i>
Edward Albert Bullock	A	<i>Central Falls</i>
Laurin Dudley Bumpus	P	<i>Boston, Mass.</i>
Robert Joseph Burgh	A	<i>Westbrook, Me.</i>
Charles Harrington Cahill	S	<i>Fall River, Mass.</i>
James Harold Campbell	P	<i>Youngstown, Ohio</i>
Martin Campbell	S	<i>Newark, N. J.</i>
Warren Russell Campbell	P	<i>North Cohasset, Mass.</i>
Marshall Hopewell Cannell	A	<i>Providence</i>
Herbert Alton Chaffee	P	<i>Seekonk, Mass.</i>
Paul Maynard Chalmers	A	<i>Lansdowne, Pa.</i>
Warren Temple Chandler	P	<i>St. Louis, Mo.</i>
Lawrence Ellery Chapman	P	<i>Providence</i>
John Alden Chesebro	P	<i>Providence</i>
Louis Spaulding Chick	P	<i>Boston, Mass.</i>
Earl Fairchild Connett	P	<i>Morristown, N. J.</i>
Clair McKinley Conzelman	P	<i>Bristol, Ct.</i>
Stuart Pullman West Cooke	P	<i>Providence</i>
Ralph Warren Copeland	A	<i>Campello, Mass.</i>
Thomas Gardiner Corcoran	A	<i>Pawtucket</i>
Thomas Coffin Crosby	P	<i>Duluth, Minn.</i>
Clifford Thomas Crowther	P	<i>Pawtucket</i>
Howard Crouje Cummings	P	<i>West Springfield, Mass.</i>
Alfred James Curry	S	<i>Providence</i>
Walter Machray Daniels	P	<i>Providence</i>
Austin Morris Davies	P	<i>Conshohocken, Pa.</i>
Ernest Dean Dawson	S	<i>Providence</i>
George Dawson, Jr.	S	<i>Providence</i>
Edward William Day	P	<i>Meshanticut</i>
Lawrence Strout Day	P	<i>Melrose, Mass.</i>
Harold Eugene Deady	S	<i>Providence</i>
Cornelius Robinson de Goey	P	<i>Providence</i>
Louis Leo Destremps	P	<i>Pittsfield, Mass.</i>

NAME		RESIDENCE
John Bowman Dick	P	<i>Pawtucket</i>
Charles George Doll	P	<i>Providence</i>
Thomas Walton Doyle	P	<i>Providence</i>
Jesse Elting DuBois	P	<i>New Paltz, N. Y.</i>
Arthur Chester Durfee	P	<i>Fall River, Mass.</i>
Clarence Manton Eddy	A	<i>Providence</i>
Allen Ashbey Edgcomb	A	<i>East Providence</i>
James Grosvenor Edmonds	A	<i>Pittsburgh, Pa.</i>
Harold Marion Edwards	P	<i>Elmhurst, N. Y.</i>
Harold Lamprey Ellsworth	P	<i>Edgewood</i>
Russell Hough Emmott	P	<i>Woonsocket</i>
Franklin Charles Eteson	P	<i>Fitchburg, Mass.</i>
Raymond Joseph Farrell	P	<i>Central Falls</i>
John Eric Fawcett	P	<i>Youngstown, Ohio</i>
Arthur Henry Feiner	A	<i>Providence</i>
Abraham Feldman	P	<i>Providence</i>
David Maxwell Feldman	A	<i>Fall River, Mass.</i>
Lynn Belcher Fellows	S	<i>Fall River, Mass.</i>
Walton Clark Forstall	P	<i>Montclair, N. J.</i>
James Gordon French	P	<i>Providence</i>
Arthur Jensing Frey	P	<i>Atlantic City, N. J.</i>
Alvin Almy Gaffney	A	<i>Fall River, Mass.</i>
Ellsworth Gale	P	<i>Pawtucket</i>
Robert Gerstenlauer	A	<i>Providence</i>
Bruce Stuart Gilchrist	P	<i>Lynn, Mass.</i>
Milton Hugh Glover	P	<i>Providence</i>
Leslie Bowen Goff	P	<i>Rehoboth, Mass.</i>
Arthur Nelson Grant	P	<i>Oxford, Pa.</i>
William Pike Graves	P	<i>Peabody, Mass.</i>
Clarence Sperry Gray	S	<i>Waterford, Ct.</i>
Avon Douglas Green	S	<i>Lynn, Mass.</i>
Earl Pillsbury Greene	P	<i>Attleboro, Mass.</i>
Richard Deming Greene	P	<i>Providence</i>
William Chace Greene, Jr.	P	<i>Providence</i>
Herbert Reginald Grimshaw	S	<i>Rutherford, N. J.</i>
Saul Sidney Grossman	P	<i>Providence</i>
Frederic William Guerin	P	<i>Worcester, Mass.</i>
Charles James Guild	P	<i>Attleboro, Mass.</i>
Delphis Victor Guillemette	S	<i>Pawtucket</i>
John Thomas Hackett	P	<i>Providence</i>
Edgar Hayes Hammond, Jr.	P	<i>Providence</i>
Benjamin Pearce Harris, Jr.	P	<i>Providence</i>
John Barr Harvie	P	<i>Rutherford, N. J.</i>

SOPHOMORES : CLASS OF 1922

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NAME		RESIDENCE
Edgar Joseph Haskell	P	<i>Providence</i>
Floriman Mason Hathaway	P	<i>West Paris, Me.</i>
Walter Hills Hibbard	P	<i>Manchester, Ct.</i>
Donald Ives Higley	P	<i>Branford, Ct.</i>
Walter Stanley Holt	P	<i>Providence</i>
Charles Hopkins	A	<i>Chepachet</i>
Amnon Hyman Horvitz	P	<i>Providence</i>
William Marshall Howard	P	<i>Malone, N. Y.</i>
Nelson Cottrell Hoxsie, Jr.	P	<i>Gilbertville, Mass.</i>
Harrison Barrows Huntoon, Jr.	P	<i>Providence</i>
Ernest Icaza	P	<i>Panama City, Panama</i>
Henry Isé	S	<i>Providence</i>
Samuel Isserlis	S	<i>Fall River, Mass.</i>
Walter Hicks Jillson	S	<i>Turner's Falls, Mass.</i>
Howard Fessenden Johnson	S	<i>Providence</i>
George Colgan Johnstone	P	<i>New York, N. Y.</i>
Robert Vechten Jones	S	<i>Sherwood Park, N. Y.</i>
Francis Joseph Jordan	P	<i>Yonkers, N. Y.</i>
Howard Allison Kenyon	P	<i>Sterling, Ct.</i>
Frank Edward Killian	P	<i>Providence</i>
Hyman Mortimor Kravetsky	S	<i>Colchester, Ct.</i>
George Lapchianjian	P	<i>Pawtucket</i>
Lawrence Solon Larry	P	<i>Washington, D. C.</i>
Harold Knut Larson	P	<i>Pawtucket</i>
Charles Theodore Lazure	P	<i>New York, N. Y.</i>
Bertrand Mulloy Lewis	P	<i>Waterbury, Ct.</i>
Floyd Wellington Libby	P	<i>Westbrook, Me.</i>
Scott Dickson Libby	P	<i>South Hamilton, Mass.</i>
Frank Browning Littlefield	P	<i>Natick</i>
Richard Webster Littlefield	P	<i>Natick</i>
Richard Eldredge Lyman, Jr.	P	<i>Providence</i>
Lloyd Pirce McAllister	P	<i>Media, Pa.</i>
Barnaby McAuslan	P	<i>Providence</i>
Earl Stanley McColley	P	<i>Providence</i>
Ernest Winfred McCormick	P	<i>South Manchester, Ct.</i>
John Harrison McCraw	P	<i>New London, Ct.</i>
Bruce Hudson McCurdy	P	<i>Providence</i>
Norman Everett McKay	P	<i>Auburn</i>
Henry Mulholland McKelvie	P	<i>Fall River, Mass.</i>
Robert Beede Macdougall	A	<i>Wellesley, Mass.</i>
Joseph Wilkes Mackenzie	S	<i>Trenton, N. J.</i>
Henry Madowsky	P	<i>Fall River, Mass.</i>
Harold Bassett Mallory	P	<i>West Springfield, Pa.</i>

NAME		RESIDENCE
Paul Manchester	P	<i>Providence</i>
Charles Edwin Mangan	P	<i>Pawtucket</i>
William Arthur Marks	P	<i>Providence</i>
Francis Paul Massaniso	A	<i>Providence</i>
Hyman Samuel Mayerson	A	<i>Woonsocket</i>
Arthur Francis Merewether	P	<i>East Providence</i>
Gilbert Follansbee Merrill	P	<i>Malden, Mass.</i>
Arthur Edward Miller	A	<i>Narragansett Pier</i>
Harold Nicholas Molter	P	<i>Providence</i>
Arthur Blair Moody, Jr.	A	<i>Providence</i>
Courtney Malcolm Morgan	A	<i>Providence</i>
Richard Henry Morrissey	P	<i>Dalton, Mass.</i>
Robert William Moxham	P	<i>Rutherford, N. J.</i>
Daniel Boyle Murphy	A	<i>Brooklyn, N. Y.</i>
William James Nairn	A	<i>Providence</i>
Godfrey Nichols Nelson, Jr.	P	<i>Brooklyn, N. Y.</i>
Chapin Slater Newhard	S	<i>St. Louis, Mo.</i>
Kenneth Henry Nichols Newton	A	<i>Providence</i>
Albert Hadfield Nuttall	P	<i>Providence</i>
Nathaniel Hubbard Nutting	P	<i>Boston, Mass.</i>
Winfield Eugene Ohlson	P	<i>Worcester, Mass.</i>
Bradford Fletcher Oxnard	A	<i>Rehoboth, Mass.</i>
William Paxton	P	<i>Chicago, Ill.</i>
Joseph Eliot Peckham	P	<i>West Medford, Mass.</i>
Aurelius Dewey Pinckney	P	<i>Augusta, Ga.</i>
Charles Hacker Pinkham, Jr.	A	<i>Lynn, Mass.</i>
Harold Leroy Pittenger	S	<i>Trenton, N. J.</i>
Horace Boss Pray	P	<i>Pawtucket</i>
Thomas Gideon Reid	S	<i>Peabody, Mass.</i>
Samuel Watson Remington, Jr.	P	<i>Providence</i>
Raymond Thomas Rich	A	<i>Hingham, Mass.</i>
Edwin Ware Richardson	P	<i>Burlington, Me.</i>
Joseph Wilbur Riker	P	<i>Newark, N. J.</i>
William Edward Rogers, Jr.	P	<i>Morristown, N. J.</i>
Walter Powell Rolland	P	<i>Lynn, Mass.</i>
Reginald Ivan Rose	A	<i>Baltic, Ct.</i>
Leo Henry Rosen	P	<i>Providence</i>
Stanton Lynk Rowley	P	<i>Newton Centre, Mass.</i>
Alexander Gaddis Russell	P	<i>Red Bank, N. J.</i>
Sedgwick Rusling Ryno	P	<i>Rahway, N. J.</i>
William Eugene Ryon, Jr.	S	<i>Stonington, Ct.</i>
Victor Hugo Sam	A	<i>Providence</i>
John Everett Sarles	S	<i>Mt. Kisco, N. Y.</i>

FRESHMEN : CLASS OF 1923

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NAME		RESIDENCE
William Kirk Schank	P	<i>Trenton, N. J.</i>
John Schneider	P	<i>Hebron, No. Dak.</i>
William Seaman	A	<i>Providence</i>
Max Mendal Sherman	P	<i>Providence</i>
William Hood Shupert	S	<i>Ardmore, Pa.</i>
Bertrand Leslie Shurtleff	P	<i>Adamsville</i>
Allen Belknap Sikes	P	<i>Suffield, Ct.</i>
Gordon Drew Smith	P	<i>Glen Ridge, N. J.</i>
Arthur Davison Somes	S	<i>Otis, Mass.</i>
Arnon Lyon Squiers, Jr.	P	<i>Brooklyn, N. Y.</i>
Chester Sides Stackpole	P	<i>Peabody, Mass.</i>
Dana Emerson Stetson	P	<i>Lynn, Mass.</i>
Edward Thomas Streker	P	<i>Providence</i>
Raymond Perry Studley	A	<i>Providence</i>
Franklin Channing Sutherland	P	<i>Providence</i>
Theodore Lawton Sweet	P	<i>Providence</i>
Carl Irving Taber	P	<i>Clinton, Mass.</i>
Wallace Nutting Thurber	P	<i>Providence</i>
Harold Francis Tracy	P	<i>Fall River, Mass.</i>
Albion Freedom Tripp	P	<i>Springfield, Mass.</i>
Stuart Hayward Tucker	A	<i>Providence</i>
Rodney Johnson Underwood	S	<i>South Hingham, Mass.</i>
Angelo George Valentino	A	<i>Providence</i>
Elmer Archer Wagner	P	<i>Ballston Spa, N. Y.</i>
Willard Mowry Walcott	A	<i>Greenville</i>
Edwin Chase Walmsley	P	<i>Pawtucket</i>
Carl Henry Wardwell	S	<i>Bluehill, Me.</i>
George Heber Webb, Jr.	P	<i>Providence</i>
Sherman Wells, Jr.	A	<i>Media, Pa.</i>
Lawrence Whitcomb, Jr.	P	<i>Brookline, Mass.</i>
John Hutchinson Whorf	P	<i>Welfleet, Mass.</i>
Walter Frank Williams	P	<i>Providence</i>
Clarence Edward Winsor	P	<i>Plainfield, Ct.</i>

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Robert Parker Adams	P	<i>Chestnut Hill, Mass.</i>
Robert Matile Addoms	P	<i>Cranford, N. J.</i>
Theodore Barton Akeley	P	<i>Presque Isle, Me.</i>
Everett Robert Alden	P	<i>Rahway, N. J.</i>
Francis Otis Allen, Jr.	P	<i>Providence</i>
Joseph Chester Allen	P	<i>Pawtucket</i>
Richard Almy	P	<i>Auburn</i>

NAME		RESIDENCE
Theodore Carl Anderson	S	<i>Deep River, Ct.</i>
Justin Meredith Andrews	P	<i>Rocky Hill, Ct.</i>
William Gailor Anibal	P	<i>Saratoga Springs, N. Y.</i>
Charles Herbert Appleby	P	<i>Glen Cove, N. Y.</i>
John Bayles Applegate	P	<i>Hoboken, N. J.</i>
Donald Davis Armstrong	P	<i>Providence</i>
Thomas Richardson Atherton	P	<i>Whitman, Mass.</i>
Frank Emmett Augur	P	<i>Cincinnati, Ohio</i>
Clarke Babcock	P	<i>Providence</i>
Robert Smith Barker	S	<i>Seekonk, Mass.</i>
Dwight Kellogg Bartlett, Jr.	P	<i>Glen Ridge, N. J.</i>
Charles Beattie	P	<i>Watervliet, N. Y.</i>
Frederic Newman Beede	P	<i>Pawtucket</i>
Roger Vassar Bellmore	P	<i>Plattsburgh, N. Y.</i>
Clarence Edwin Bennett	P	<i>Lakewood</i>
Edmund Joseph Bennett	P	<i>North Providence</i>
Alfred Bevis, Jr.	P	<i>St. Louis, Mo.</i>
Newell Walcott Bishop	P	<i>Pawtucket</i>
Kenneth Pond Blake	A	<i>Lexington, Mass.</i>
Robert Gordon Bleakney	S	<i>Hyde Park, Mass.</i>
Paul Eddy Boughton	S	<i>Poughkeepsie, N. Y.</i>
Edward Hooper Bowen	A	<i>Fall River, Mass.</i>
Donald Grahame Boyd	P	<i>Lee, Mass.</i>
Edwin Croston Brady	P	<i>Providence</i>
Charles Arthur Braitsch	A	<i>Providence</i>
Edward Calvin Bratcher	P	<i>Ekron, Ky.</i>
Harold Owen Briggs	S	<i>Rhinebeck, N. Y.</i>
Gilbert Egert Broking	P	<i>Bronxville, N. Y.</i>
Donald Proctor Brown	S	<i>Danvers, Mass.</i>
Philip Chace Brown	S	<i>Providence</i>
Lawrence James Burby	P	<i>Plainfield, Ct.</i>
Randal Cayford Burrell	P	<i>Newton, Mass.</i>
William Hodnett Butler	P	<i>Fall River, Mass.</i>
Robert Frederic Cahill	P	<i>Cincinnati, Ohio</i>
John Warren Campbell	S	<i>Fall River, Mass.</i>
Robert Nelson Carr	P	<i>Elizabeth, N. J.</i>
Robert Emmett Carrigan	P	<i>Meredith, N. H.</i>
Joseph Frederick Starr Carter	P	<i>Asbury Park, N. J.</i>
Edward Joseph Chaloux	P	<i>Watervliet, N. Y.</i>
Clinton George Clough	P	<i>Warwick</i>
Stedman Roby Coe	P	<i>New York, N. Y.</i>
Arthur Dickinson Colburn	S	<i>Hyde Park, Mass.</i>
Edwin Asbury Cole, Jr.	P	<i>Housatonic, Mass.</i>

NAME		RESIDENCE
Howard Warren Comstock	P	<i>Fall River, Mass.</i>
John Francis Connelly	P	<i>North Brookfield, Mass.</i>
Halsey Stuart Connett	S	<i>Newark, N. J.</i>
Robert Ball Coons	P	<i>Ballston, Spa, N. Y.</i>
Ronald Winslow Cordingley	P	<i>Chestnut Hill, Mass.</i>
John Nicholas Cordts	P	<i>Kingston, N. Y.</i>
Philip Hugh Cox	P	<i>Montclair, N. J.</i>
Judson James Cutler	P	<i>Lynn, Mass.</i>
George Ivison Dana	P	<i>Canton, Mass.</i>
Clarence Raymond Day	S	<i>Shirley Mills, Me.</i>
Eliphalet John Decker	P	<i>La Grange, Me.</i>
George Rogers Decker	P	<i>La Grange, Me.</i>
Charles Thomas Dempsey	P	<i>Thompsonville, Ct.</i>
Domenico Thomas De Simone	S	<i>Providence</i>
Julius Frank Dezso	P	<i>Bridgeport, Ct.</i>
William Dighton	P	<i>Monticello, Ill.</i>
Norman Dine	P	<i>Lynn, Mass.</i>
Walter Irving Dolbeare	P	<i>Brookline, Mass.</i>
Christopher Joseph Doody, Jr.	P	<i>New York, N. Y.</i>
Robert Francis Dube	A	<i>Fall River, Mass.</i>
Frank Benjamin Durfey, 2d	P	<i>Jewett City, Ct.</i>
Thomas Benjamin Dustin	S	<i>West Wareham, Mass.</i>
Joseph Sydney Eisenberg	A	<i>Woonsocket</i>
Arthur Harold Ellis	A	<i>Hackensack, N. J.</i>
Lawrence Cornelius Elmendorf	P	<i>Lakewood, N. J.</i>
Clarence Luville Emery	P	<i>Saco, Me.</i>
Vladimir Nicholawitch Engalitcheff	P	<i>New York, N. Y.</i>
Howard Leavitt Fales	S	<i>Wrentham, Mass.</i>
Herbert Shepard Familton	S	<i>Brooklyn, N. Y.</i>
Homer Ramsdell Faulkner	S	<i>Brighton, Mass.</i>
Paul Feely	S	<i>Woonsocket</i>
Walter Fenner, Jr.	S	<i>Providence</i>
Philip Finegold	A	<i>Providence</i>
Jerome Layton Fisher	P	<i>Providence</i>
Alfred Langdon Fitzgerald	P	<i>New London, Ct.</i>
Leo Edward Aloysius Fontaine	A	<i>Providence</i>
Robert Hosea Fosdick	P	<i>Cincinnati, Ohio</i>
Arthur Stephen Fox	P	<i>Great Barrington, Mass.</i>
John Leonard Gærste	P	<i>Curaçao, Dutch West Indies</i>
Herbert Symonds Gardner	A	<i>Blackstone, Mass.</i>
Ralph Leete Gardner	S	<i>Salysersville, Ky.</i>
Cecil Gladstone Garland	P	<i>Rockland, Me.</i>
George Henry Gates	S	<i>Ivoryton, Ct.</i>

NAME		RESIDENCE
Winton Goodrich George	A	<i>Little Compton</i>
Robert Gibson	S	<i>Youngstown, Ohio</i>
Willis Briggs Gifford	P	<i>West Tisbury, Mass.</i>
Robert Henry Girvin, Jr.	S	<i>Hopedale, Mass.</i>
Kenneth Prescott Gleason	P	<i>Warren, N. H.</i>
Louis Bliss Goff	P	<i>Providence</i>
Edmund Goldstein	P	<i>Providence</i>
Guillermo Enrique González	P	<i>Sonturce, P. R.</i>
Aaron Roberts Goodall	A	<i>Cincinnati, Ohio</i>
Edward Joseph Gorman, Jr.	P	<i>Holyoke, Mass.</i>
Francis Vreeland Greene	S	<i>Riverpoint</i>
Ralph Drayton Greene	S	<i>Riverpoint</i>
Jacob Greenstein	A	<i>Providence</i>
Kalei Kaonohi Gregory	P	<i>Kailua, Hawaii</i>
Albert Lippitt Mason Gross	A	<i>Melrose, Mass.</i>
Frank Lesster Gross	P	<i>New York, N. Y.</i>
Eugene Frederick Grunewald	P	<i>Brooklyn, N. Y.</i>
Mianese Gulian	P	<i>Newton, Mass.</i>
Thomas Richard Hadfield	S	<i>Lawrence, Mass.</i>
James Henry Hagan, Jr.	A	<i>Providence</i>
LeRoy Weeden Hart	S	<i>Providence</i>
George Frederic Havell	P	<i>Newark, N. J.</i>
Alden Farrelly Hays	P	<i>St. Louis, Mo.</i>
William Garland Heeks	A	<i>Concord Junction, Mass.</i>
Herman Fulsche Helfenbein	S	<i>Petersburg, Ind.</i>
Wallace Howard Henshaw	S	<i>Suffield, Ct.</i>
Edward Hallsted Hewitson	P	<i>Edgewood</i>
Daniel Chase Hey, Jr.	A	<i>East Providence</i>
Donald Bryant Hidden	S	<i>Fitchburg, Mass.</i>
Robert Bennett Hiller, Jr.	P	<i>Marion, Mass.</i>
Everett Winslow Hobart	P	<i>Cincinnati, Ohio</i>
Paul Leon Holmgren	S	<i>Englewood, N. J.</i>
Percival Hopwood	P	<i>New York, N. Y.</i>
Roger Fales Horton	S	<i>Edgewood</i>
Lincoln Hamblen Howe	P	<i>Westbrook, Me.</i>
Ralph Wellington Hughes	S	<i>East Lynn, Mass.</i>
Edward Ainslie Hummel	S	<i>Woonsocket</i>
Jean Paul Jaquette	S	<i>Kalispell, Mont.</i>
Theodore Roosevelt Jeffers	A	<i>Peabody, Mass.</i>
Alfred Browning Jenks	S	<i>Franklin, N. H.</i>
Willard Brownell Jewell	P	<i>Little Compton</i>
Charles Roger Johnson	P	<i>Lynn, Mass.</i>
Willard Forest Johnson	A	<i>Camden, N. J.</i>

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NAME		RESIDENCE
Francis Leland Jones	A	<i>Greenfield, Mass.</i>
John Davis Edmands Jones, Jr.	A	<i>Providence</i>
Elmer Roy Joslyn	P	<i>Lebanon, N. H.</i>
Harold Marquiss Keele	A	<i>Monticello, Ill.</i>
Ralph Henry Kippax	S	<i>Pawtucket</i>
Mortimer Jacob Klingon	P	<i>Colchester, Ct.</i>
Samuel Max Klivansky	P	<i>Lynn, Mass.</i>
Wilfred Ernest Kneeland	S	<i>Newburyport, Mass.</i>
Lester Kriebel Kriebel	A	<i>Lansdale, Pa.</i>
Myron Urban Lamb	S	<i>Portland, Me.</i>
Lawrence Lanpher	P	<i>Glen Ridge, N. J.</i>
Albert Smith Larrabee	A	<i>Lakewood, N. J.</i>
Edward Noble Larrabee	A	<i>Roslindale, Mass.</i>
Arvid Norlander Larson	S	<i>New Britain, Ct.</i>
Norman Lester Lawrence	P	<i>Quinton, N. J.</i>
George Vincent Leddy	P	<i>Red Bank, N. J.</i>
Morris Albert Levin	A	<i>Newark, N. J.</i>
Vernon Alden Libby	P	<i>Pittsfield, Me.</i>
Edward Winslow Lincoln	A	<i>Barrington</i>
Wallace Lisbon	P	<i>Providence</i>
Robert Cushing Litchfield	P	<i>Bridgeport, Ct.</i>
John Willard Lohnas	P	<i>Saratoga Springs, N. Y.</i>
Anthony Joseph Loiacono	P	<i>New London, Ct.</i>
Stillman Wadsworth Loomis	P	<i>Chicago, Ill.</i>
George Harris Luchini	P	<i>Milford, Mass.</i>
Ernest Lyon Lynn	P	<i>Providence</i>
John Francis Lyons	P	<i>Providence</i>
Lawrence Anthony McCarthy	A	<i>Pawtucket</i>
Robert Lee McCarty, Jr.	P	<i>McKeesport, Pa.</i>
Stephen Arthur McClellan	S	<i>Washington, D. C.</i>
William Best McCormick	P	<i>Providence</i>
Burton Ross McCumber	S	<i>Elizabeth, N. J.</i>
John James McDonald	P	<i>East Providence</i>
Donald Merton McWain	A	<i>Orleans, Vt.</i>
Walter Kilgore Macfarlane	P	<i>Seattle, Wash.</i>
Clyde Alfred Maitland	P	<i>Washington, D. C.</i>
Spencer Talmon Manser	S	<i>Woodridge, N. J.</i>
Carl Eaton Martin	A	<i>Union Village, Vt.</i>
Joseph Marto	P	<i>Boston, Mass.</i>
Allen Randall Mathues	P	<i>Media, Pa.</i>
Robert Osmond Meader	P	<i>Auburn</i>
Horace Messer Mechem	A	<i>Battle Creek, Mich.</i>
Robert Langdon Meyers	P	<i>Asbury Park, N. J.</i>

NAME		RESIDENCE
William Harvey Miller, Jr.	P	<i>Floral Park, N. Y.</i>
Earl Whitney Milligan	S	<i>Saylesville</i>
Olcott Griswold Mills	P	<i>Westerly</i>
Samuel Byron Milton	P	<i>Washington, D. C.</i>
Jacob Harold Mogelever	P	<i>Pawtucket</i>
Eben Paine Morse	S	<i>Hackensack, N. J.</i>
Albert Edgerton Mulliken	S	<i>Pelham, N. Y.</i>
Lawrence Bennett Munro	S	<i>Pottersville, Mass.</i>
William Calvin Munro	S	<i>Peabody, Mass.</i>
Howard Hughes Murphy	P	<i>Baltimore, Md.</i>
John Francis Murphy	P	<i>Woonsocket</i>
Charles Nathanson	P	<i>Central Falls</i>
Algot Reginald Nelson	A	<i>Providence</i>
Arthur Remsen Nelson	A	<i>Brooklyn, N. Y.</i>
Milton Powell Newsome	P	<i>Newark, N. J.</i>
George Henry Nichols	P	<i>Wollaston, Mass.</i>
Leo Joseph O'Donnell	P	<i>Woonsocket</i>
James Francis O'Rourke	A	<i>Providence</i>
Isaac Orliansky	S	<i>Providence</i>
Norman Justin Paasche	P	<i>Medford, Mass.</i>
Clifford Alpheus Packard	P	<i>Rockland, Mass.</i>
Forrest Freese Paige	P	<i>Hardwick, Mass.</i>
George Henry Parker, Jr.	P	<i>Providence</i>
John Selden Parker	S	<i>Providence</i>
Sydney Carlton J. Patton	P	<i>Brooklyn, N. Y.</i>
William Richard Perillo	P	<i>Brooklyn, N. Y.</i>
Eugene Franklin Perry, Jr.	S	<i>Nyack, N. Y.</i>
Rivhall Perry	P	<i>Providence</i>
Edward Badstue Petersen	P	<i>Poughkeepsie, N. Y.</i>
Edward Martin Powers	P	<i>Westbrook, Me.</i>
Fergus Beattie Purves	P	<i>Hartford, Ct.</i>
Israel Rabinovitz	A	<i>Woonsocket</i>
Louis Lorenzo Redding	A	<i>Wilmington, Del.</i>
John Curtis Reed	A	<i>Morristown, N. J.</i>
Hugh Francis Rennie	P	<i>Wilmington, Del.</i>
Harry Howard Reynolds	P	<i>Providence</i>
Harvey Sweet Reynolds	A	<i>Providence</i>
Clarence Lyman Rice	P	<i>Palmer, Mass.</i>
Laurence A. Rice	P	<i>Cambridge, Mass.</i>
Robert Williamson Ritchie	S	<i>Plattsburgh, N. Y.</i>
George Elmer Roegner	S	<i>Providence</i>
Earle Wilson Rogers	P	<i>Fiskville</i>
George John Romieu	P	<i>Thompsonville, Ct.</i>

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NAME		RESIDENCE
Frederic Robertson Roper	A	<i>Riverpoint</i>
Willan Charles Roux	P	<i>East Orange N. J.</i>
Donald Clarke Rubel	A	<i>New York, N. Y.</i>
Joseph Bonaparte Rumsey	A	<i>Coudersport, Pa.</i>
Robert Joseph Russell, Jr.	A	<i>Uxbridge, Mass.</i>
Roland Gustav Saacke	P	<i>Providence</i>
Agostino Sammartino	A	<i>Providence</i>
Carl Oscar Samuelson	P	<i>South Ryegate, Vt.</i>
Leonard Perkins Sayles	A	<i>Chepachet</i>
Charles Henry Schneider	P	<i>Attleboro, Mass.</i>
William Kenneth Sheehan	A	<i>Pelham Manor, N. Y.</i>
Kenneth Paul Sheldon	P	<i>Auburn, N. Y.</i>
Samuel Sibulkin	P	<i>Haverhill, Mass.</i>
Bernhard Louis Simmons	P	<i>Worcester, Mass.</i>
Willard Simon	P	<i>Youngstown, Ohio</i>
Albert Nathaniel Sjoberg	P	<i>Auburn</i>
Edward Shaw Skillings	P	<i>Portland, Me.</i>
George Washington Smith	S	<i>Port Chester, N. Y.</i>
Richard Carroll Smith	P	<i>Providence</i>
Ronald Bancroft Smith	A	<i>Providence</i>
Rolf Einar Soderback	S	<i>Providence</i>
Charles Soforenko	P	<i>Fall River, Mass.</i>
Robert Harris Spellman	P	<i>Somers, Ct.</i>
Francis Marshall Sprague	P	<i>South Weymouth, Mass.</i>
Philip Edwin Stanley	A	<i>Birmingham, Pa.</i>
Ralph Minot Stearns	S	<i>Wilmot, N. H.</i>
Thomas Meriam Stetson	P	<i>New Bedford, Mass.</i>
Harold Lomas Summerfield	P	<i>Providence</i>
Robert Hughes Summers	P	<i>Youngstown, Ohio</i>
Paul Worthington Taylor	P	<i>Providence</i>
Stuart Fairchild Terrill	S	<i>Brookfield Centre, Ct.</i>
George Frederick Thibodeau	S	<i>Newport, N. H.</i>
Don Carlos Thorndike	P	<i>Auburn</i>
Richard Thorndike	P	<i>Auburn</i>
Marcus Alvah Tinker	P	<i>Nashua, N. H.</i>
Abel Stuart Tinkham	S	<i>Taunton, Mass.</i>
Alvin Chalmers Toner	P	<i>Lonsdale</i>
Daniel Vincent Troppoli	A	<i>Providence</i>
Samuel Hubert Turkington	A	<i>Three Rivers, Mass.</i>
John Norman Tyler	S	<i>Deep River, Ct.</i>
Herbert Erwin Van Hoesen	P	<i>Providence</i>
Gilbert Harvey Van Note	S	<i>Belmar, N. J.</i>
Walter Ihmt Waldau	A	<i>Englewood, N. J.</i>

NAME		RESIDENCE
Milon Otto Welch	P	<i>Westbrook, Me.</i>
Philip Albro Welch	A	<i>Providence</i>
Heber Edward Wharton	P	<i>Baltimore, Md.</i>
Alfred Edmund Whitehouse, Jr.	P	<i>Westwood, N. J.</i>
Robert Thomas Williams	P	<i>Central Falls</i>
John Andrew Wilson	A	<i>Jersey City, N. J.</i>
Paul Knight Wilson	P	<i>West Somerville, Mass.</i>
Nathan Winograd	S	<i>Fall River, Mass.</i>
Michael Wofsey	P	<i>Stamford, Ct.</i>
Jarvis Clinton Worden	P	<i>Providence</i>
William Chesley Worthington	A	<i>Providence</i>
Vincent York	P	<i>Rangeley, Me.</i>
George Howard Young	S	<i>New Bedford, Mass.</i>
Harold Herbert Young	P	<i>Providence</i>
Philip Taylor Young	P	<i>Quincy, Mass.</i>

SPECIAL STUDENTS

George Fearing Allen	<i>Providence</i>
Everett Munyan Arnold	<i>East Providence</i>
Walter Francis Becket	<i>Providence</i>
Samuel Belmont Berger	<i>Providence</i>
Bruce Sayre Boyd	<i>Lee, Mass.</i>
Kurwin Robert Boyes	<i>Providence</i>
Glenn Lee Carey	<i>Laconia, N. H.</i>
John Carder Champlin	<i>Block Island</i>
Harold Edwin Chapman	<i>Providence</i>
Nathaniel Borden Chase	<i>Central Falls</i>
Norman Church Cleaveland	<i>Providence</i>
Charles Henry Cole	<i>Chepachet</i>
Edward Anthony Cooney	<i>Providence</i>
William Michael Cushman	<i>Washington, D. C.</i>
James Matthew Dalton	<i>Milford, Mass.</i>
Frederick Irvin Daniels	<i>Riverside</i>
Bertram Emery Deware	<i>Gilford, N. H.</i>
Gilbert Ernest Fasteson	<i>Providence</i>
Edward Louis Fielding, Jr.	<i>Dorchester, Mass.</i>
Frank Curtis Fish	<i>Providence</i>
Robert Forbis	<i>Forest Grove, Ore.</i>
Rufus Clinton Fuller, Jr.	<i>Providence</i>
Lloyd Elisha Gallup	<i>Waterford, Ct.</i>
Lester Edmond Gavitt	<i>Westerly</i>
John Bratcher Goetz	<i>New York, N. Y.</i>

SPECIAL STUDENTS

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NAME	RESIDENCE
Alphonse Gogreve	<i>Cincinnati, Ohio</i>
Sayles Gorham	<i>Providence</i>
Henry Edward Goss	<i>South Swansea, Mass.</i>
Carl Augustus Green	<i>Providence</i>
Harold Lee Grindle	<i>Arlington, N. Y.</i>
William Joseph Harper	<i>Riverpoint</i>
Clyde Clayton Hill	<i>Lebanon, N. H.</i>
Henry Knowles Holden	<i>Warwick Neck</i>
Albert Brown Jeffers	<i>Central Falls</i>
Malcolm Johnson	<i>Weston, Mass.</i>
Howard William Jones	<i>Youngstown, Ohio</i>
Charles Dewey Koechling	<i>Pawtucket</i>
Henry Gordon Taft Langdon	<i>Providence</i>
Oscar Stanley Lapham	<i>Westerly</i>
Alpha Anson Learned	<i>Providence</i>
William Andros Lester, Jr.	<i>Cranston</i>
Arthur Killam Litchfield	<i>Bridgeport, Ct.</i>
Thomas Henry Luther	<i>Providence</i>
Fergus Edward Cannon McOsker	<i>Providence</i>
Alfred Russell Mack	<i>Pawtucket</i>
John Hugh Magee	<i>Bristol</i>
Henry Francis Manchester, Jr.	<i>Providence</i>
Clarence Edward Mansfield	<i>Washington, Pa.</i>
Kenilworth Hillery Mathus	<i>Edgewood</i>
George Joseph Maynard	<i>Providence</i>
Gilbert De Blois Miller	<i>Providence</i>
Hugh Miller	<i>Providence</i>
John Douglas Mitchell	<i>Providence</i>
John Francis Murphy	<i>Lynn, Mass.</i>
Philip Gordon Nase	<i>Pawtucket</i>
John Joseph O'Brien, Jr.	<i>Riverpoint</i>
John Augustus O'Neill	<i>Pawtucket</i>
Edmund Freeman Ormsbee	<i>Mill River, Mass.</i>
Harold William Pearce	<i>East Providence</i>
John Everett Pierce	<i>Enfield, N. H.</i>
William Brainard Prentiss	<i>New Haven, Ct.</i>
John Francis Quinn, Jr.	<i>Pawtucket</i>
Walter Merritt Richardson	<i>Georgiaville</i>
Charles Lester Scanlon	<i>Saylesville</i>
Joseph Wechster Scharf	<i>Brooklyn, N. Y.</i>
Wernert Jacques Schuler	<i>New Bedford, Mass.</i>
William Harold Searles	<i>Pawtucket</i>
Charles Lowrie Semans	<i>Uniontown, Pa.</i>

NAME	RESIDENCE
John Joseph Sheridan	<i>Providence</i>
George Thomas Slavin	<i>East Providence</i>
Ralph Evans Stanton	<i>Providence</i>
Ernest Albert Sterling	<i>Medford, Mass.</i>
Mervin Edwin Stevens	<i>Springfield, Mass.</i>
John Jameson Sullivan	<i>Pawtucket</i>
Fred Elmore Sweet	<i>Providence</i>
Walter Winfred Vandal	<i>Pawtucket</i>
Jerome Anthony Walsh	<i>Oneonta, N. Y.</i>
William Wager Weeden, Jr.	<i>Providence</i>
Jerome West	<i>Longmeadow</i>
Arthur Horrocks Wilde	<i>South Swansea, Mass.</i>
John Humphreys Williams	<i>Providence</i>

APPENDIX

THE BROWN UNIVERSITY TEACHERS' ASSOCIATION

THE Brown University Teachers' Association was organized in 1903. The purpose of the Association is "first, to further the mutual interests of Brown University and the schools preparing students therefor; and second, to promote the welfare of the Alumni of the University who are teachers." The seventeenth annual meeting of the Association was held at Brown University on Saturday, March 15, 1919.

OFFICERS FOR 1919-20

President: CHARLES HENRY FORBES, A.M., *Professor of Latin, Phillips Academy, Andover, Mass.*

Vice-Presidents: WALTER BALLOU JACOBS, A.M., *Professor of Education, Brown University;* JOHN CAMPBELL SWIFT, A.B., *First Assistant, English High School, Providence.*

Secretary: CLAUS EMANUEL EKSTROM, A.B., *Instructor in Department of Education, Brown University.*

Treasurer: CLARENCE HARTWELL MANCHESTER, A.M., *Vice-Principal, Technical High School, Providence.*

Executive Committee: THE PRESIDENT OF THE UNIVERSITY AND THE OFFICERS OF THE ASSOCIATION, *ex officio*; ROBERT K. BENNETT, A.B., *Superintendent of Schools, Central Falls;* WENDELL A. MOWRY, A.M., *Superintendent of Schools, Woonsocket;* MRS. HARRIET P. FULLER, A.M., *First Assistant, Classical High School, Providence.*

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Treasurer: WILLIAM WASHBURN MOSS, A.M.

Historian: PROFESSOR WILFRED HAROLD MUNRO, L.H.D.

‡ For the Women's Organization of the Phi Beta Kappa Society, see page 271.

Committee on Alumni and Honorary Membership: ALBERT BENJAMIN WEST, A.M., ALEXANDER MANLIUS BURGESS, M.D., PROFESSOR ROBERT FOSTER CHAMBERS, Ph.D., the Secretary, *ex officio*.

Committee on Arrangements: THE PRESIDENT, *ex officio*, CLIFFORD HENRY GRIFFIN, M.D., NATHANIEL HOWLAND GIFFORD, M.D.

Committee on New Chapters: PROFESSOR JAMES QUAYLE DEALEY, Ph.D., PROFESSOR NATHANIEL FRENCH DAVIS, LL.D., GEORGE LELAND MINER, A.B.

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Auditor: CLAUDE RAYMOND BRANCH, A.B.

MEN ELECTED IN 1919

Alumni: GEORGE COLEMAN GOW, '84, THOMAS CROSBY, JR., '94, HEZEKIAH ANTHONY DYER, '94, JOHN HOPE, '94.

Seniors: WILLIAM HENRY BEATTIE, BENJAMIN WILLIAMS BROWN, ROGER TILLINGHAST CLAPP, FRANK EDMUND ECK, RUDOLPH JOHN CHAUNCEY FISHER, CHARLES HENRY PECKHAM, EDWARD SEFTON PORTER, WILLIAM JOHN ROSS, ANTHONY JAMES RUSSO, ARTHUR GODFREY SELLEN, HOWARD FRANKLIN SHAWCROSS, LOUIS SMITH.

Juniors: LEROY WALTON BLACK, HARLEY FRANK CAREY, JAMES QUAYLE DEALEY, JR., WALTER RICHMOND GARDNER, JOHN WALTER HARRIMAN, ROBERT BRUCE LINDSAY.

THE BROWN CHAPTER OF THE SOCIETY OF THE SIGMA XI

Students who have taken at least fifty-two semester hours in pure or applied science are, in their Senior year, eligible to membership in the honorary scientific society, Sigma Xi, provided that they "have given promise of marked ability in those lines of work which it is the object of the Society to promote."

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CHICAGO. *President*, Lieut.-Col. Noble B. Judah, '04. *Secretary and Treasurer*, Harry E. Roelke, '11, Crerar Library, Chicago, Ill.

MICHIGAN. *President*, Wilfred C. Leland, n. '92. *Secretary*, Theodore B. Farnsworth, '12, 614 Ford Building, Detroit, Mich.

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UNIVERSITY OF ILLINOIS LIBRARY

MAY 11 1920

PUBLICATIONS†

The following list includes the official publications of the University with other pamphlets and periodical publications of interest to alumni and friends of the University. Unless otherwise stated, copies of any of these publications may be obtained by applying to the Registrar, Brown University.

BULLETIN OF BROWN-UNIVERSITY

This series includes the Annual Catalogue of Brown University; Annual Report of the President to the Corporation; Program of Commencement Week; Announcement of Courses for the following year; Announcement of Courses for the Women's College.

THE ANNUAL REPORT OF THE TREASURER

THE HISTORICAL CATALOGUE OF BROWN UNIVERSITY, 1764-1914

This Catalogue gives the names of all persons who have been connected with Brown University, with brief biographical data, and the present addresses of living graduates.

789 pages, cloth, \$1.25, delivered. Copies of the Historical Catalogue, 1764-1904, may still be obtained. Price \$1.00, delivered. Address the Keeper of Graduate Records, Brown University, and make checks payable to Brown University.

THE HISTORY OF BROWN UNIVERSITY, 1764-1914

By Walter Cochrane Bronson, Litt.D., Professor of English Literature. Published in connection with the celebration of the one hundred and fiftieth anniversary of the founding of the University.

548 pages, cloth, \$2.00, delivered. Printed by D. B. Updike, at The Merrymount Press, Boston, Mass. Address the Library, Brown University, and make checks payable to Brown University.

THE SESQUI-CENTENNIAL OF BROWN UNIVERSITY, 1764-1914. A COMMEMORATION

Edited by William Vail Kellen, Ph.D., LL.D. A graphic account of the Celebration with all the addresses in full.

307 pages, cloth, \$2.50, delivered. Printed by D. B. Updike, at The Merrymount Press, Boston, Mass. Address the Library, Brown University, and make checks payable to Brown University.

† For special publications of the Women's College, see page 272.

THE CHARLES K. COLVER LECTURES

The American Conception of Liberty and the American Conception of Government. By Frank Johnson Goodnow, LL.D., President of Johns Hopkins University.

Price, fifty cents, delivered. Address the Library, Brown University, and make checks payable to Brown University.

Medical Research and Human Welfare. By William Williams Keen, M.D., LL.D.

Price \$1.25 net. Address Houghton Mifflin Co., Boston, Mass.

The Responsible State: a reëxamination of fundamental political doctrines in the light of world war, and the menace of anarchism. By Franklin Henry Giddings, LL.D.

Price \$1.00 net. Address Houghton Mifflin Co., Boston, Mass.

Democracy: Discipline: Peace.

By William Roscoe Thayer, LL.D.

Price \$1.00 net. Address Houghton Mifflin Co., Boston, Mass.

STUDENT LIFE AT BROWN

Published by Alumni.

A pamphlet of 28 pages, with illustrations.

THE BROWN ALUMNI MONTHLY

Published by Alumni.

Subscription price \$1.00 a year. Address Brown Alumni Monthly, Brown University.

THE WOMEN'S COLLEGE

IN BROWN UNIVERSITY

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ORGANIZATION OF THE WOMEN'S COLLEGE

INSTRUCTION for undergraduate women‡ is provided by a department of the University known as THE WOMEN'S COLLEGE IN BROWN UNIVERSITY. The aim of the Women's College is to offer to all properly prepared women the same examinations, the same courses of study under the same teachers, and the same degrees that the University offers to men, but to maintain separate classes and to preserve the distinct social life of a separate college.

The Corporation of the University has supervision and control of the Women's College as of other departments of the University, and for this purpose appoints annually an Executive Committee of the Women's College. The President of the University is charged with the general direction, supervision, and government of this College as of other departments of the University. The immediate direction, supervision, and control devolve, subject to the direction of the President, on the Dean of the Women's College. An Advisory Council, appointed under the authority of the Corporation, advises with the President and the Dean upon matters relating to the Women's College, and makes recommendations to the Executive Committee of the Women's College or to the Corporation. The immediate administration of the social life of the College, subject to the President of the University and the Dean of the College, rests with the Student Government Association.

The Faculty of the Women's College is composed of the heads of all departments of instruction in Brown University, together with all professors and instructors who are actually teaching in the College.

Catalogues of the Women's College may be obtained from the Registrar of the Women's College in Brown University, Providence, R. I. Requests for information not contained in this Catalogue or in the Bulletins should be addressed to the Dean of the Women's College in Brown University, Providence, R. I.

‡ In the Graduate Department of Brown University all courses intended for graduate students are open to women on the same terms as to men.

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INSTRUCTION

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Professor of Classical Literature and Archaeology

EMMA BRADFORD STANTON, A.M., REGISTRAR OF THE WOMEN'S COL-

LEGE

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Supervisor of Publicity and Self-Support Work

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Professors GARDNER, LANGDON, BRONSON, EVERETT, ALLINSON, *and* MEAD,
Dean KING.

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TER C. BRONSON.

ADMISSION TO THE WOMEN'S COLLEGE

REQUIREMENTS FOR ADMISSION

THE requirements for admission to the Women's College are the same as those which the University prescribes for men. For information concerning admission by certificate or examination, and the times and places of examinations, see pages 31-35. Certificates and applications for permission to take examinations should be sent to the Registrar of the University. For the entrance requirements for the various degrees, admission to advanced standing, and admission of special students, see pages 35-52. Each applicant for registration as a special student must consult the Dean of the Women's College before registering.

REGISTRATION AND ENROLMENT

The regulations governing registration and enrolment are the same at the Women's College as at the University. (See page 52.) All students must apply for registration and enrolment at the office of the Registrar of the Women's College, in Pembroke Hall, between 9 a.m. and 12 m., or between 2 p.m. and 4 p.m., on either of the two days preceding the opening of College. Permission to change a previous registration must be obtained from the Dean, on the same days and at the same hours.

REQUIREMENTS FOR DEGREES

The requirements for the various degrees are explained on pages 54-62. Upon students of the Women's College who complete satisfactorily the work leading to the degree of Bachelor of Arts, Bachelor of Philosophy, or Bachelor of Science,† the Board of Fellows of the University confers the appropriate degree.

FEEES §

For the academic year beginning in September, 1920, students at the Women's College will be charged a tuition fee of \$175. This will be paid in two instalments: \$87.50 upon registration in September and \$87.50 upon registration in February. No deduction in tuition is made on account of absence. Laboratory fees, etc., must be paid two weeks before the close of a semester. (See pages 169-171.)

† The Women's College does not at present offer courses leading to the degree of Bachelor of Science.

§ For the year 1919-20 the fees will be as stated in the Catalogue for 1918-19.

Special students at the Women's College will be charged \$17.50 a semester for each course holding three recitations a week. Laboratory fees are in addition to this. Special students who are taking fewer than five academic courses will be charged \$17.50 for a gymnasium course of three hours.

SPECIAL FEES. Candidates for a first degree who do not pay four years full tuition fees must pay for all extra courses counted toward the degree at the rate of \$8.75 per semester for each three-hour course. This amount must be paid at the beginning of the semester preceding the completion of the degree work. This rule does not apply to courses credited from other institutions.

COURSES OF INSTRUCTION

COURSES designated by a † are given at the University; a limited number of approved women students may be admitted to these courses upon application to the Dean of the Women's College. Women are also admitted to certain other University courses with the special permission of the departments concerned and with the consent of the Dean of the Women's College. In starred courses a final mark covering the work of the course as a whole is given at the end of the course, the mark given at the end of the first semester being regarded as temporary.

ART

11, 12. *General History of Art.* Dr. SHAPLEY
Mon., Wed., Fri., at 12.20.

13. *Greek Sculpture*

[14. *Italian Renaissance Painting*]
Announced but not given in 1919-20.

15,* 16.* *Freehand Drawing*

Given at the Rhode Island School of Design. Hours to be arranged with the Director.

17,* 18.* *Advanced Drawing*

Given at the Rhode Island School of Design. Mon., Tu., Wed., at 2. Lecture hour to be arranged with the Director.

21, 22.† *Art Seminary*

23, 24.† *Journal Club*

ASTRONOMY

1, 2. *Descriptive Astronomy.* Professor CURRIER
Tu., Th., Sat., at 12.20.

BIBLICAL LITERATURE AND HISTORY

1, 2.† *Elementary Hebrew*

11, 12.† *Gospel and Epistles in Greek*

[15, 16. *Old Testament Literature and History*]

Not offered in 1919-20.

17, 18. *New Testament Literature and History*. Professor FOWLER
Tu., Th., Sat., at 9.20.

21, 22.*† *Biblical Seminary—The Teachings of Jesus*

27.† *Origin and Growth of the Hebrew Religion*

28.† *Social Teachings of the Prophets and Jesus*

30.† *History of Religion (the same as Philosophy 30)*

BIOLOGY

1, 2. *General Biology*. Miss WHITING and Miss HAYWOOD
Tu., Th., Sat., at 11.20.

3, 4. *Comparative Anatomy of Vertebrates*. Professor WALTER
Tu., Th., Sat., at 11.20.

5, 6.† *Anatomy of the Nervous System*

7, 8. *Embryology and Histology*. Professor MEAD
Mon., Th., Fri., at 2.

12.† *General Physiology*

13, 14.† *Chemical Physiology*

15.† *Invertebrate Zoölogy*

46.† *Natural History*

16.† *Bacteriology*

17, 18.† *Advanced Bacteriology*

37, 38.† *Bacteriological Research*

BOTANY

[1, 2. *General Course*]

Announced but not given in 1919-20.

3, 4.† *Physiological Anatomy*

11, 12.† *Physiology*

13, 14.† *Plant Pathology*

CHEMISTRY

1, 2. *Descriptive Chemistry*. Professor DAVISON and Mr. RUSSELL
Mon., Wed., Fri., at 12.20.

3, 4.† *Qualitative and Quantitative Analysis*

5, 6.† *Quantitative Analysis, Advanced Course*

7, 8.† *Organic Chemistry*

12.† *Organic Dyes*

15, 16.† *Physical Chemistry*

21, 22.† *Organic Preparations, Advanced Course*

23, 24.† *Inorganic Preparations, Advanced Course*

27, 28.† *Conference on Special Topics in Chemistry*

53, 54.† *Qualitative Analysis and Organic Chemistry*

ECONOMICS†

1. *Elementary Economics*. Professor VAUGHAN

Second semester. Preceded in the first semester by Social and Political Science 1. *Tu., Th., Sat., at 10.20.*

5, 6.† *Money and Banking*7. *Problems of Labor and Industry*. Professor VAUGHAN

First semester. *Mon., Wed., Fri., at 9.20.*

8. *Socialism and Allied Movements*. Professor VAUGHAN

Second semester. *Mon., Wed., Fri., at 9.20.*

11, 12.† *Public Finance and Financial History*15.† *Trade and Transportation in the United States*16.† *Corporations and Corporation Finance*17, 18.† *Accounting*

EDUCATION

2. *Principles of Education*. Professor JACOBS

First semester. *Mon., Wed., Fri., at 9.20.*

4. *Methods of Teaching*. Professor JACOBS

Second semester. *Mon., Wed., Fri., at 9.20.*

3. *Educational Psychology*. Mr. EKSTROM

First semester. *Mon., Wed., Fri., at 10.20.*

21. *Education in Rhode Island*. Professor JACOBS

Second semester. *Mon., Wed., Fri., at 10.20.*

5, 6.† *Secondary Education*11, 12.† *Experimental Education*15, 16.† *Seminary in Education*

† Courses in Economics marked with a † are open to undergraduates if elected by three or more students.

ENGLISH

1. *Rhetoric and Composition*. Professors BENEDICT and HASTINGS,
Mr. MASON

First semester. *1st and 2d divisions, Mon., Wed., Fri., at 9.20; 3d division,
Mon., Wed., Fri., at 10.20.*

2. *Rhetoric and Composition*. Professor HASTINGS and Mr. MASON
Second semester. *1st and 2d divisions, Mon., Wed., Fri., at 9.20.*

48. *English Literature from the Beginning to 1700.* ‡ Professor
POTTER

Second semester. *Mon., Wed., Fri., at 9.20.*

50. *Introduction to the Study of English Literature.* ‡ Professor
HUNTINGTON

Second semester. *Mon., Wed., Fri., at 9.20.*

49. *English Literature from 1700 to 1900.* ‡ Professor HASTINGS
First semester. *Mon., Wed., Fri., at 9.20.*

5, 6. *Advanced Composition*. Professor BENEDICT
Th., 2 to 4.

[7, 8. *Argumentative Composition*]
Announced but not given in 1919-20.

[17, 18. *Chaucer*]
Announced but not given in 1919-20.

23, 24. *The Modern English Drama*. Professor CROSBY
Mon., Wed., Fri., at 10.20.

25, 26. *Shakspeare*. Professor POTTER
Tu., Th., Sat., at 12.20.

‡ Students who have had a high school course in the history of English Literature are advised to take 60 and 37. Others are advised to take 48, 49.

37. *English Literature from 1832 to 1892. Prose.*† Professor HUNTINGTON

First semester. *Mon., Wed., Fri., at 11.20.*

38. *English Literature from 1832 to 1892. Poetry.* Professor HUNTINGTON

Second semester. *Mon., Wed., Fri., at 11.20.*

[39, 40. *American Literature*]

Not offered in 1919-20.

GEOLOGY

1. *Materials of the Earth and its Structure.* Professor BROWN

First semester. *Tu., Th., Sat., at 9.20.*

6. *Economic Geography of North America and Europe.* Professor BROWN

Second semester. *Tu., Th., Sat., at 9.20.*

2.† *Historical Geology*

5.† *General Geography of Latin America*

13.† *Problems in Dynamic and Stratigraphic Geology*

9, 10.† *Mineralogy and Petrography*

11, 12.† *Research in Geology and Geography*

GERMANIC LANGUAGES AND LITERATURES

[1, 2. *Elementary German, First Year*]

Announced but not given in 1919-20.

[5, 6. *Intermediate German*]

Announced but not given in 1919-20.

† Students who have had a high school course in the history of English Literature are advised to take 50 and 37. Others are advised to take 48, 49.

7, 8. *Advanced German*. Professor CROWELL

Mon., Wed., Fri., at 12.20.

9, 10. *Modern Germany — Advanced Composition*. Professor MITCHELL

Mon., Wed., Fri., at 12.20.

15, 16. † *German Drama of the Nineteenth Century*

19, 20. † *Introduction to Scientific Prose*

25, 26. † *German Literature to the End of the Classical Period*

GREEK LITERATURE AND HISTORY

A, B. *Beginner's Course: Greek Grammar, Xenophon, and Homer*.

Professor SMITH

Mon., Wed., Fri., at 10.20.

1. *Homer and other Greek Poetry exclusive of the Drama*. Professor ALLINSON

First semester. *Tu., Th., Sat., at 9.20.*

2. *Plato and Lysias*. Professor SMITH

Second semester. *Tu., Th., Sat., at 9.20.*

3. *Lucian and the Dramatic Poets* ‡

4. *The Historians* ‡

[5. *The Drama*]

Announced but not given in 1919-20.

[6. *The Orators*]

Announced but not given in 1919-20.

12. *Greek Composition*. Professor ALLINSON

1 hour. Second semester. Elective for undergraduates.

‡ For the academic year 1919-20 courses 3, 4 are combined with courses 1, 2.

15. *Greek Civilization*. Professor ALLINSONSecond semester. *Mon., Wed., Fri., at 11.20.*17, 18.† *Greek Seminary*

HISTORY

1, 2. *Medieval and Modern History of Europe*. Professor COLLIER*Mon., Wed., Fri., at 11.20.*6. *European History, 1815–1871*. Professor COLLIERFirst semester. *Tu., Th., Sat., at 9.20.*10. *European History, 1871–1919*. Professor COLLIERSecond semester. *Tu., Th., Sat., at 9.20.*13, 14.† *Seminary in European History*[21, 22. *The United States under the Constitution*]

Announced but not given in 1919–20.

25, 26.† *Seminary in American History*27, 28. *The History of the United States in its Contact with Foreign Powers*. Professor SIOUSSAT*Mon., Wed., Fri., at 11.20.*

MATHEMATICS

61, 62. *Elementary Analysis, First Year*. Professors RICHARDSON, MANNING, and BURGESS*1st division, Tu., Th., Sat., at 9.20; 2d and 3d divisions, Tu., Th., Sat., at 10.20.*1. *Solid and Spherical Geometry*. Professor MANNINGSecond semester. *Tu., Th., Sat., at 10.20.*65, 66. *Elementary Analysis, Second Year*. Professor ARCHIBALD*Tu., Th., Sat., at 11.20.*9.† *Differential Equations*

10.† *Graphical Methods*

21, 22.† *Function Theory of a Complex Variable*

[41, 42. *Fundamental Problems of Algebra*]

Announced but not given in 1919-20.

53.† *Mathematical Theory of Investment*

54.† *Mathematical Theory of Statistics*

55, 56.† *Theoretical Mechanics*

MUSIC

1. *The Symphony*. Mr. WILDE

First semester. *Mon., Wed., Fri., at 11.20.*

2. *The Opera*. Mr. WILDE

Second semester. *Mon., Wed., Fri., at 11.20.*

PHILOSOPHY

1, 2. *Introduction to Philosophy*. PROFESSOR JONES

Mon., Wed., Fri., at 11.20.

3, 34. *Psychology*. PROFESSOR DELABARRE

Tu., Th., Sat., at 10.20.

[4. *Ethics*]

Not offered in 1919-20.

5, 6.† *Psychology, Intermediate Course*

[9. *Philosophy of Religion*]

Not offered in 1919-20.

10.† *Applications of Psychology*

11, 12.† *Experimental Psychology, Introductory Laboratory Course*

14, 15.† *Contemporary Philosophy*

17, 18.† *Psychology, Advanced Course*

19, 20.† *Experimental Psychology, Advanced Laboratory Course*

21, 22.† *Advanced Ethics, Seminary Course*

30.† *History of Religion, or Biblical Literature 30*

PHYSICS

[1, 2. *Elementary Physics*]

Announced but not given in 1919-20.

3, 4.† *Elementary Physics, continued*

5, 6.† *Experimental Physics*

11, 12.† *Advanced Laboratory Course*

15, 16.† *Physics, Advanced Course*

23, 24.† *Precision Measurements in Photometry, Electricity, and Magnetism*

ROMAN LITERATURE AND HISTORY

1. *Cicero's De Senectute, De Amicitia; Terence's Phormio*. Professors HARKNESS and GREENE

First semester. *Mon., Th., Fri., at 2.*

2. *Selections from Horace*. Professor GREENE

Second semester. *Mon., Th., Fri., at 2.*

3. *Catullus and Virgil's Eclogues*. Professor KING

First semester. *Mon., Wed., Fri., at 10.20.*

4. *Plautus' Captivi, Trinummus, Rudens*. PROFESSOR GREENE
Second semester. *Mon., Wed., Fri., at 10.20.*

7, 8. *Latin Prose*. PROFESSORS HARKNESS and GREENE
Tu., Th., Sat., at 10.20.

[11, 12. *Latin Composition*]

Announced but not given in 1919-20.

16. *Roman Civilization*. PROFESSORS HARKNESS and GREENE
First semester. *Mon., Wed., Fri., at 11.20.*

ROMANCE LANGUAGES AND LITERATURES

1, 2. *Elementary French, First Year*. MR. MASSEY
Mon., Wed., Fri., at 11.20.

5, 6. *Intermediate French*. PROFESSOR CROWELL and MR. MASSEY
1st division, Mon., Wed., Fri., at 10.20; 2d division, Mon., Wed., Fri., at 11.20.

7, 8. *Advanced French*. PROFESSOR HUNKINS and MR. RAND
1st division, Tu., Th., Sat., at 9.20; 2d division, Tu., Th., Sat., at 12.20.

11, 12. *The Romantic School*. PROFESSOR HUNKINS
Tu., Th., Sat., at 10.20.

15, 16. *Elementary Spanish, First Year*. PROFESSOR JOHNSON
Mon., Wed., Fri., at 12.20.

21, 22. *Elementary Spanish, Second Year*. PROFESSOR JOHNSON
Tu., Th., Sat., at 12.20.

17, 18. *Elementary Italian*. PROFESSOR LANGDON
Tu., Th., Sat., at 11.20.

23, 24. † *Practice in Writing and Speaking French*

25, 26. † *Intermediate Spanish*

27, 28. *French Literature and Civilization*. PROFESSOR LANGDON
Tu., Th., Sat., at 9.20.

SOCIAL AND POLITICAL SCIENCE

SOCIAL SCIENCE

1. *Elementary Social and Political Science*. Professor DEALEY

First semester. Followed in the second semester by Economics 1. *Tu., Th., Sat., at 10.20.*

3, 4. *Modern Social Problems*. Professor BUCKLIN

Tu., Th., Sat., at 11.20.

13, 14. † *Social Research, Investigation and Field Work*16. *Social Psychology*. Professor DEALEY

First semester. *Mon., Th., Fri., at 2.*

15. *Sociology*. Professor DEALEY

Second semester. *Mon., Th., Fri., at 2.*

POLITICAL SCIENCE

1. *Elementary Political Science*

See Social Science 1.

3. *Government and Politics of the United States*. Professor DUNNING

First semester. *Tu., Th., Sat., at 10.20.*

4. *Municipal Government and Politics*. Professor DUNNING

Second semester. *Tu., Th., Sat., at 10.20.*

HYGIENE AND PHYSICAL EDUCATION †

NELLIE E. BUSSELL, A.B., *Director of Hygiene and Physical Education*

CHRISTINE E. LEMMO, *Assistant in Hygiene and Physical Education*

1. *Freshman Course*

In the fall and spring, sports. From Thanksgiving to the spring recess, practice in gymnastics, games and folk dances, and conferences in practical hygiene. Miss BUSSELL and Miss LEMMO.

† For further information about the Department of Hygiene and Physical Education see page 262.

Three hours. Through the year. Required of all Freshmen. *1st division, Mon., Tu., Fri., at 3; 2d division, Mon., Tu., Fri., at 4.*

2. *Sophomore Course*

Similar to the Freshman course, but more advanced. Miss BUSSELL and Miss LEMMO.

Three hours. Through the year. Required of all Sophomores. *Mon., Th., Fri., at 2.*

3. *Junior and Senior Course*

Similar to the Sophomore course, but more advanced. Two periods of sports may be substituted for gymnastics. Miss BUSSELL and Miss LEMMO.

Three hours. Through the year. Required of all Juniors and Seniors. *Tu. at 12.20 or at 2, and two other hours at the convenience of the student.*

Remedial Course

Special exercises for students in need of corrective gymnastics. May be substituted for course 1, 2, or 3. Miss LEMMO.

Three hours. Through the year. *Tu. at 2, and two other hours at the convenience of the student.*

5. *Play Course*

Plays, games, and folk-dances suitable for elementary schools, playgrounds, and social settlements. Miss BUSSELL.

One hour. From Thanksgiving to the spring recess. Elective for Seniors and Juniors.

6. *Dancing*

Esthetic and interpretive technique and dances. Miss BUSSELL.

One hour. Through the year. Elective for Seniors and Juniors. *Th. at 3.*

PREMIUMS, PRIZES, AND HONORS

THE GASPEE CHAPTER DAUGHTERS OF THE AMERICAN REVOLUTION PRIZE. This prize of forty dollars is awarded annually to that student in the Senior or Junior class of the Women's College who shall present the best essay of recognized merit upon some topic in American history. The essays are to bear each an assumed name, and to be accompanied by an envelope marked with the assumed name and enclosing the candidate's real name and ad-

dress. The essays must be handed to the Dean before May 15. The award is announced at Commencement. The subject for 1919-20 is: *The Work of Henry Wheaton as Diplomat and Publicist.*

THE CHACE PRIZE. The will of Mrs. Elizabeth D. Chace makes provision for a prize of twenty-five dollars, to be awarded to that student of the Women's College who shall present the best essay, of recognized merit, upon the Women's Suffrage Movement. The essays must be handed to the Dean before May 15.

THE SOCIETY OF COLONIAL DAMES PRIZE IN AMERICAN HISTORY. The income of a fund of fifteen hundred dollars, known as the Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906, is awarded annually as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use of authorities, and should, in general, extend to at least four thousand words. Competitors must give their names to the head of the Department of History by March 1; the essays must be handed to the Dean before May 12. The award is announced at Commencement. The subject for 1919-20 is: *The Early Development of Ship-building on Narragansett Bay.*

THE EDYTHE PECK ADAMS PRIZE. This prize is offered by the Class of 1901 for the best short story written by an undergraduate of the Women's College. The essays must be handed to the Dean before May 15.

ADDITIONAL PREMIUMS. The students of the Women's College are entitled to compete in all examinations for premiums and prizes offered in Brown University. If any woman is entitled to a first premium in a competition primarily intended for men, a prize, the amount of which is duly announced, is awarded by the College. In 1918-19 the following premiums were awarded to women:

A collateral first premium in preparatory French to **DESSIE KUSHELEVITCH**, instructed in the High School, Woonsocket.

FINAL HONORS are awarded by the University to women on the same conditions as to men. See pages 195-197.

FINANCIAL AID TO STUDENTS

FELLOWSHIPS AND SCHOLARSHIPS

THE EMMA JOSEPHINE (AYER) ARNOLD ARCHAEOLOGICAL FELLOWSHIP, of ten thousand dollars, founded by Dr. Oliver H. Arnold in memory of his wife; the income is awarded, first, to a member of the graduating class, or, second, to a graduate of not more than ten years' standing, who is adequately prepared for post-graduate work in Archaeology, either Classical or Oriental, and who through scholarly attainments and by habits of zealous and diligent study gives great promise of a useful and successful career. The income is to be applied to the expenses of a one, two, or three year course in Archaeology either in the United States or in any foreign country. In case there is no applicant of sufficient merit among the graduates of the Women's College, the Fellowship is to be awarded for one year to a male graduate of the University who meets the above requirements. If there are no applicants for the use of this Fellowship in Archaeology, it is to be given for one year of post-graduate work in Higher Mathematics to a graduate of the Women's College who has exceptional ability and intends to follow the teaching of Mathematics as a profession. Applications for this Fellowship should be accompanied by academic records, testimonials as to character, ability, and health, specimens of written work, and a statement of the applicant's plan of work, and should be sent to the Dean of the Women's College before January 1.

THE ANNIE CROSBY EMERY ALUMNAE FELLOWSHIP was founded by the Alumnae Association of Brown University in 1914. The purpose of the Fellowship, maintained in honor of the second dean of the Women's College in Brown University, is to stimulate the intellectual life of the undergraduate students. It is awarded as an academic honor to a member of the graduating class on the basis of scholarly ability, excellence and breadth of general character, and good health. This Fellowship is to be used for a year of graduate study at any American university or college of acknowledged standing. It is not to be applied for, but is awarded each year, if there is a candidate of sufficient excellence. The formal announcement of the award is made by the Dean at Chapel exercises.

THE OLIVER CROMWELL GORTON ARNOLD BIOLOGICAL FELLOWSHIP is awarded annually for post-graduate work to a student, man or woman, in accordance with the requirements printed on pages 178, 179.

LA STAZIONE ZOOLOGICA. Alumnae of Brown University are eligible to La Stazione Zoologica at Naples. A woman's table is maintained by the Naples Table Association. Application should be made to Mrs. Albert D. Mead, 283 Wayland Avenue, Providence.

THE ALBERT HARKNESS FUND provides free tuition at the American School of Classical Studies at Athens for adequately prepared graduates of Brown University. See page 166.

THE SARAH E. DOYLE SCHOLARSHIP, of one thousand dollars, which bears the name of its founder; the income is applied toward the payment of the tuition of students in the Women's College who have been prepared for college in the Providence English High School.

THE SARAH SUTTON SCHOLARSHIP, of one thousand dollars, founded by one of her daughters.

THE DANIELS SCHOLARSHIP, of twenty-five hundred dollars; the income to be used toward paying the expenses of one or more women pursuing studies either in the University or in the Women's College.

THE HOWARD SCHOLARSHIP, of one thousand dollars, presented by James Leland Howard.

THE THAYER SCHOLARSHIP, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815; the income to be for the education of any young man or woman, a resident of Uxbridge, Mass., indorsed by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

THE MARIA STORRS PECK SCHOLARSHIP, of one thousand dollars, presented by her sisters.

THE ELI THAYER SCHOLARSHIP OF THE OREADS, of three thousand dollars, founded by the Oread Collegiate Institute Association, in memory of the Hon. Eli Thayer, the founder of the Institute; the income to be for the education of a deserving student in the Women's College, preferably a descendant of a former student of the Institute.

THE WILLIAM FULLER AYER SCHOLARSHIPS, two of two thousand dollars each, one of one thousand dollars, founded by Dr. Oliver H. Arnold in memory of William Fuller Ayer; the income is given "to poor and deserving students showing diligence and marked ability in their collegiate studies."

THE DAVID W. HOYT SCHOLARSHIP, of twenty-seven hundred dollars, founded by the Alumni Association of the Providence English High School; the income to go each year to some young man or woman designated by the Principal or the Acting Principal of the Providence High School, subject to the approval of the President or the Acting President of Brown University.

THE SUSAN E. KING SCHOLARSHIP, of one thousand dollars, the income to be given preferably to a member of the First Baptist Church in Providence.

THE CLARA ELIZABETH COMSTOCK SCHOLARSHIP, of one thousand dollars, presented by Louise Dearborn Gage; the income to be applied toward paying the tuition of undergraduate students in the Women's College in Brown University.

THE CHURCHILL FUND, with an annual income of one hundred and fifty dollars, founded by the Rhode Island Women's Club; the income to go each year to students in the Women's College, preferably to the daughter of a member of the Club.

Reduction in tuition fees is made by the College to some students, provided they are in need of such aid and maintain a high standard of scholarship. Application for reduction of tuition fees should be made in writing to the Dean of the Women's College on or before May 1.

THE LOAN FUNDS

A Loan Fund, established and maintained by the Rhode Island Society for the Collegiate Education of Women, is available for the use of Sophomores, Juniors, and Seniors, who may borrow moderate sums at a low rate of interest. Further information may be obtained from the Dean of the Women's College.

A Loan Fund, established and maintained by the Alumnae Association of Brown University, is available for the use of Freshmen who, in the judgment of the Alumnae trustees of the Fund, shall show promise of scholarly attainment.

THE SELF-SUPPORT COMMITTEE

The Self-Support Committee has for its purpose the care of students who need to earn money. It aims to secure employment for students, to regulate as far as possible the compensation and the conditions of outside work, and to make the amount of such work commensurate with the physical and mental strength of the student.

THE COLLEGE BUILDINGS

THE Women's College has a separate recitation hall, gymnasium, dormitories, and basket-ball and tennis grounds; but uses the various libraries, laboratories, and museums of the University. The grounds of the Women's College are an eighth of a mile from the University, with the main entrance at 172 Meeting Street. Pembroke Hall, the recitation building, contains the offices of the Dean and the Registrar, the chapel, recitation rooms, a reading room, a

reference library, a study, and a lunch room. Sayles Gymnasium contains the office of the Director of Hygiene and Physical Education, a large hall with a gallery, two rest rooms, a room for corrective work, and a social room; the basement is fitted with dressing rooms, lockers, bathrooms, needle and shower baths, and bowling alleys.

The College has two dormitories. Miller Hall, 118 Cushing Street, contains fifty-six single rooms for students, together with a library, and reception, dining, and sitting rooms. Metcalf Hall, 98 Cushing Street, contains sixty single rooms for students, together with a library, and reception and dining rooms. The present charge for a corner room and board is \$335, for other rooms and board, \$325. Printed plans of the dormitories, together with other information, may be obtained from the Dean of the Women's College.

Students who cannot secure rooms on the campus are required to live in houses approved by the College.

PROVISION FOR WORSHIP, HEALTH, AND RECREATION

CHAPEL

CHAPEL services, with special speakers and with music furnished by the College choir, are held in Pembroke Hall four days a week. Attendance is required. One chapel service each month is in charge of the Christian Association.

HYGIENE

The Department of Hygiene and Physical Education aims to encourage habits of healthful living, with special emphasis upon proper posture, rational exercise, and rest. To this end all new students are required to attend lectures in Hygiene, conferences are held, and physical examinations are given before the assignment of exercise and at the end of the year by the Instructors in Hygiene and by Dr. Frank T. Fulton. Facilities are provided for exercise and rest and there is a reference library of books on practical hygiene. Students who, because of their organic condition or temporary disability, are unable to take the regular class work, are given restricted or corrective exercise, or prescribed periods in the rest room, as a substitute. Outdoor sports are supervised by the Instructors in Hygiene. A resident nurse supervises the health of the students.

THE LIDA SHAW KING DECENNIAL FUND

This Fund was founded by the Rhode Island Society for the Collegiate Education of Women in honor of Miss King. The income is to be used "for the entertainment of guests, and the maintenance of the social and cultural side of college life."

STUDENT ORGANIZATIONS AND ENTERTAINMENTS

The Student Government Association is an organization of the entire student body for promoting the welfare of the College.

The Christian Association conducts monthly meetings, generally addressed by some speaker of experience, and provides classes for the study of the Bible and of missions. There are French and Mathematical Clubs, which carry on their work in connection with the academic departments concerned. The College Forum gives an opportunity to all students for open discussion of the important questions of the day, under the leading of competent men and women. The Question Club, a society composed of the presidents of all the large student organizations, is helpful in forming opinion on matters of student interest. There are two undergraduate publications, *The Sepiad*, a literary periodical, and *The Brün Mael*, an annual review of College life. Under the management of *The Sepiad* is published a monthly college newspaper, *The Sepiad Supplement*. Interest in the drama and music is fostered by a dramatic society; by a glee club; by the annual presentation of an original Sophomore masque; and by an annual song contest between the classes. The Athletic Association coöperates with the Department of Hygiene by arranging bowling, tennis, and basket-ball tournaments. Class organizations, an all-college society, and an advisory system, whereby the senior class is given responsibility for the welfare of the Freshmen, promote sociability and the spirit of helpfulness.

Lectures, concerts, and other entertainments are provided from time to time by the College.

FORM OF BEQUEST

All gifts, legacies, and bequests for the Women's College should be made payable to "Brown University, in Providence, in the State of Rhode Island and Providence Plantations," and designated for the use of the Women's College.

STUDENTS IN THE WOMEN'S COLLEGE

SENIORS : CLASS OF 1920

NAME		RESIDENCE
Marguerite Adelaide Armstrong	P	<i>Manton</i>
Kathleen Mary Barr	A	<i>Providence</i>
Dorothy Westervelt Bennett	P	<i>North Providence</i>
Mary Ball Blake	P	<i>Providence</i>
Edith Steele Bowen	A	<i>North Providence</i>
Ruth Stewart Brown	P	<i>New York, N. Y.</i>
Anna Pauline Butler	A	<i>Pawtucket</i>
Ruth Pearson Chandler	P	<i>Scranton, Pa.</i>
Mildred Frances Chase	A	<i>Providence</i>
Hope Arnold Cushing	A	<i>North Providence</i>
Marion Alberta Day	A	<i>Providence</i>
Mariette De Robbio	P	<i>Providence</i>
Rachel Tupper Easterbrooks	A	<i>Newport</i>
Minerva Rilla Gates	P	<i>Providence</i>
Zylpha Marie Goulett	P	<i>Stevenson, Ct.</i>
Constance McLean Hayden	P	<i>North Providence</i>
Dorothy Stephans Holt	A	<i>Pawtucket</i>
Mary Gertrude Honan	A	<i>Anthony</i>
Grace Ethelena Lewis	P	<i>Providence</i>
Madonna Violet McDermott	A	<i>Providence</i>
Grace Heath Maurer	A	<i>Reading, Pa.</i>
Frances Morrill Merriam	A	<i>Providence</i>
Charlotte Anna Mikalson	A	<i>Methuen, Mass.</i>
Rosa Jessup Minkins	A	<i>Pawtucket</i>
Cecelia Madeleine Morin	A	<i>Willimantic, Ct.</i>
Helen May Newbury	P	<i>Palmer, Mass.</i>
Camelia Papalia	P	<i>Westerly</i>
Harriet Ellen Perry	A	<i>Providence</i>
Avis Miller Pillsbury	P	<i>Providence</i>
Elsie May Potter	A	<i>Natick</i>
Margaret Louise Pressey	A	<i>Ashton</i>
Dorothy Preston	P	<i>Providence</i>
Margaret Preston	A	<i>Providence</i>
Margaret Magdalen Quinn	A	<i>Phenix</i>
Marion Wood Raybold	A	<i>Providence</i>
Mary Augusta Rhodes	P	<i>Providence</i>
Mildred Elizabeth Runyeon	A	<i>Reading, Pa.</i>
Rosa Lee Schneider	A	<i>Providence</i>

THE WOMEN'S COLLEGE

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NAME		RESIDENCE
Beatrice Alice Smith	P	<i>Pawtucket</i>
Mary Elizabeth Spencer	A	<i>Warwick</i>
Bernice Sylvester	A	<i>Brockton, Mass.</i>
Alice Tattrie	A	<i>Bristol</i>
Katharine Adelaide Torrey	P	<i>Providence</i>
Helen Kingsbury Wallace	P	<i>Bristol</i>
Miriam Elizabeth Weaver	A	<i>Central Falls</i>
Nettie Wilsker	A	<i>Newport</i>
Marjorie Helen Woodward	A	<i>Springfield, Mass.</i>
Lucy Marie Young	P	<i>Brockton, Mass.</i>

JUNIORS : CLASS OF 1921

Sadie Denie Abrich	P	<i>Providence</i>
Dorothy Charlotte Baker	P	<i>Providence</i>
Pauline Alverson Barrows	A	<i>Providence</i>
Avice Estella Bliss	A	<i>Providence</i>
Olive Flora Briggs	A	<i>East Greenwich</i>
Dorothy Emmons Bryant	A	<i>Saylesville</i>
Fannie Irwin Campbell	A	<i>Phenix</i>
Lillian Hedwig Nathalie Carlen	P	<i>Providence</i>
Dorothy Chace	P	<i>South Dartmouth, Mass.</i>
Helen Cooper	A	<i>Attleboro, Mass.</i>
Lena Lucile Crapo	P	<i>Taunton, Mass.</i>
Sarah Crovitz	P	<i>Providence</i>
Mary Wilbur Cushman	P	<i>Fairhaven, Mass.</i>
Agnes Anne Davitt	P	<i>Providence</i>
Florence Gertrude Eddy	P	<i>Providence</i>
Gertrude Eisenberg	P	<i>Pawtucket</i>
Lorraine Hunter Ferguson	P	<i>Providence</i>
Ida Frant	A	<i>Newport</i>
Beatrice Luise Guildford	P	<i>Providence</i>
Constance Williams Haley	A	<i>Stonington, Ct.</i>
Mary Isabelle Halloran	A	<i>Berkeley</i>
Sarah Ann Hill	A	<i>Riverside</i>
Josephine Alicè Hope	A	<i>Edgewood</i>
Gladys Mae Jordan	P	<i>Swansea, Mass.</i>
Elizabeth Linden Kiley	A	<i>Pawtucket</i>
Anna Blanche La Fond	P	<i>Woonsocket</i>
Elsie Ellen Lord	P	<i>Providence</i>
Dorothy Loynes	A	<i>Springfield, Mass.</i>
Grace Mildred McCall	A	<i>Reading, Pa.</i>

BROWN UNIVERSITY

NAME		RESIDENCE
Alice Margaret Mackenzie	P	<i>Arnold's Mills</i>
Dorothy Elaine Maxwell	A	<i>Slatington, Pa.</i>
Frances Mattiline Money	P	<i>West Greenwich Centre</i>
Elisabeth Nightingale	P	<i>Moosup, Ct.</i>
Mary Greeley Alberta O'Neil	A	<i>Providence</i>
Margaret Comstock Packer	A	<i>Waterbury, Ct.</i>
Flora Belle Peirce	P	<i>New Bedford, Mass.</i>
Florence Elizabeth Pettibone	P	<i>New Milford, Ct.</i>
Lettie Harriet Robidou	P	<i>Ellis, Mass.</i>
Bernice Alethea Rodemann	P	<i>Newark, N. J.</i>
Margaret Drowne Ross	P	<i>Providence</i>
Mollie Nyma Rubenstein	P	<i>Providence</i>
Leonilda Sansone	A	<i>Bristol</i>
Palmyra Rose Serpa	P	<i>Providence</i>
Susan Theresa Shea	A	<i>Brockton, Mass.</i>
Fannie Beatrice Smith	A	<i>Providence</i>
Olive Anne Taplin	A	<i>Springfield, Mass.</i>
Virginia Lee Tourtellot	P	<i>Providence</i>
Adeline Bell Wetmore	A	<i>Watertown, Ct.</i>
Lois Wilbur	P	<i>New Bedford, Mass.</i>
Ida Wilsker	A	<i>Newport</i>

SOPHOMORES: CLASS OF 1922

Dorothy May Abbott	A	<i>Providence</i>
Isabel Ross Abbott	A	<i>Providence</i>
Doris Elizabeth Allen	A	<i>Providence</i>
Elizabeth Harriet Baker	A	<i>Farmington, Me.</i>
Helen Lincoln Borden	P	<i>Providence</i>
Kathleen Victoria Boyd	A	<i>Providence</i>
Laurine Wheaton Bradford	A	<i>Bristol</i>
Helen Sara Brintzenhoff	P	<i>Reading, Pa.</i>
Hope Elizabeth Burgess	A	<i>Rockland, Mass.</i>
Helen Capwell	P	<i>Providence</i>
Annie Strange Coggeshall	A	<i>Bristol</i>
Katherine Elizabeth Colton	A	<i>Providence</i>
Marion Elizabeth Craig	A	<i>Springfield, Mass.</i>
Irene Isabel Crockett	P	<i>South Manchester, Ct.</i>
Barbara Louise Crossley	A	<i>Providence</i>
Madeline Glase Dickinson	P	<i>Reading, Pa.</i>
May Lillian Earl	P	<i>St. Paul, Minn.</i>
Rose Mary Finkelstein	A	<i>Waterbury, Ct.</i>
Edith Allegra Fletcher	A	<i>Springfield, Mass.</i>

THE WOMEN'S COLLEGE

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NAME		RESIDENCE
Helen Frances Gallivan	A	<i>Providence</i>
Lura Sperry Gray	P	<i>Waterford, Ct.</i>
Una Maude Greene	P	<i>Palmer, Mass.</i>
Malvina Mary Grieves	P	<i>Providence</i>
Phoebe Gates Hall	P	<i>Westerly</i>
Mary Ruth Heady	A	<i>Springfield, Mass.</i>
Constance Alice Herlihy	P	<i>Providence</i>
Esther Wichnin Jaffee	P	<i>Central Falls</i>
Celia Kaufman	A	<i>Attleboro, Mass.</i>
Eunice Truman Keough	A	<i>Pawtucket</i>
Beatrice Rebecca Kershaw	A	<i>Pawtucket</i>
Dorothy Leavens	A	<i>Pawtucket</i>
Leota Nichols Lyon	A	<i>Bridgeport, Ct.</i>
Mary Catherine McCarthy	A	<i>Providence</i>
Miriam Josephine McCaughey	A	<i>Bristol</i>
Carolyn Ethel Macdonald	P	<i>East Providence</i>
Edith Louise McEwen	A	<i>Providence</i>
Dorothy Metcalf McVay	P	<i>Carolina</i>
Mary Louise Mann	P	<i>West Suffield, Ct.</i>
Mildred Earle Mowry	A	<i>Smithfield</i>
Irene Nightingale	P	<i>Moosup, Ct.</i>
Gertrude May Niven	P	<i>Providence</i>
Helen Louise Osborne	A	<i>Bridgeton</i>
Helena Roma Papalia	P	<i>Westerly</i>
Margaret Elizabeth Perry	A	<i>Greene</i>
Ruth Howard Preston	A	<i>Providence</i>
Mildred Mae Reed	A	<i>Thomaston, Me.</i>
Lucile Rogers	A	<i>Providence</i>
Marian Ellen Sampson	A	<i>Providence</i>
Helen Frances Sheehan	A	<i>Providence</i>
Eunice Rose Simpson	A	<i>Worcester, Mass.</i>
Carrie Frances Sisson	P	<i>Woodville</i>
Isabelle Swain Smith	A	<i>Providence</i>
Esther Cordelia Spear	A	<i>Springfield, Mass.</i>
Amey Steere	P	<i>Chepachet</i>
Virginia Louise Swift	A	<i>Plymouth, Mass.</i>
Helen Julia Thayer	A	<i>Woonsocket</i>
Nancy Alice True	A	<i>Providence</i>
Helen Lowe Urquhart	A	<i>Providence</i>
Esther Marian Ward	A	<i>Plymouth, Mass.</i>
Claudia Wilson	P	<i>Conshohocken, Pa.</i>

FRESHMEN: CLASS OF 1923

NAME		RESIDENCE
Mildred Andrews	A	<i>Campello, Mass.</i>
Mary Calder Appel	A	<i>Lancaster, Pa.</i>
Susan Burton Appel	P	<i>Lancaster, Pa.</i>
Helen Brown Avery	P	<i>Providence</i>
Mildred Russell Bailey	A	<i>Providence</i>
Gladys Louise Baker	P	<i>Sterling, Ct.</i>
Margaret Dover Barton	A	<i>Fall River, Mass.</i>
Norma Florence Barton	A	<i>New Milford, Ct.</i>
Ruth Bateman	P	<i>Somerville, N. J.</i>
Gladys Margaret Bauer	P	<i>Attleboro, Mass.</i>
Eleanor Beers	A	<i>Providence</i>
Agnes Clementyne Boylan	A	<i>Providence</i>
Irene Elizabeth Boylan	A	<i>Providence</i>
Lottie Brindle	A	<i>Woonsocket</i>
Mary Sulley Brown	A	<i>Springfield, Mass.</i>
Ruth May Bugbee	P	<i>Edgewood</i>
Ruth Upton Burt	P	<i>Auburn</i>
Amy Amanda Campbell	P	<i>Crompton</i>
Elsie Marie Carlen	A	<i>Providence</i>
Dorothy Margaret Carr	A	<i>South Manchester, Ct.</i>
Margaret Elizabeth Cheetham	A	<i>Providence</i>
Janet Chew	P	<i>Fall River, Mass.</i>
Anna Gardner Coggeshall	A	<i>Bristol</i>
Agnes Cole	A	<i>Three Rivers, Mass.</i>
Sarah Cooperstein	P	<i>Taunton, Mass.</i>
Marion Florence Copp	A	<i>Elizabeth, N. J.</i>
Gladys Marie Craig	A	<i>Taunton, Mass.</i>
Margaret Mary Cummings	P	<i>Providence</i>
Katharine Makepeace Curtis	P	<i>Greensboro, N. C.</i>
Alice Estelle Desmond	A	<i>Providence</i>
Florence Helen Devine	P	<i>East Suffield, Ct.</i>
Miriam Schick Dick	P	<i>Reading, Pa.</i>
Elizabeth Ewart	P	<i>Pawtucket</i>
Marion Liliias Fairweather	P	<i>Providence</i>
Catherine Theresa Fanning	A	<i>Providence</i>
Josephine Mary Flumere	P	<i>Framingham, Mass.</i>
Grace Genevieve Gavigan	A	<i>Fall River, Mass.</i>
Esther Louise Hagstrom	A	<i>Pawtucket</i>
Ruth Hanchett	A	<i>Providence</i>
Marian Glaze Hassinger	A	<i>Reading, Pa.</i>
June Heller	A	<i>Lancaster, Pa.</i>

THE WOMEN'S COLLEGE

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NAME		RESIDENCE
Helen Anderson Hoff	P	<i>Neshanic Station, N. J.</i>
Mary Catherine Hogan	A	<i>Pawtucket</i>
Mary Elizabeth Holland	A	<i>Fall River, Mass.</i>
Dorothy Beryl Hotchkiss	A	<i>Pawtucket</i>
Sarah Jacobson	A	<i>New Bedford, Mass.</i>
Ruth Elizabeth King	A	<i>Lawrence, Mass.</i>
Dessie Kushelevitch	A	<i>Woonsocket</i>
Evelyn Lochman	P	<i>Salem, Mass.</i>
Ruth Almira Lothrop	A	<i>Auburn</i>
Alice Catherine Lynch	A	<i>Fall River, Mass.</i>
Mary Lillian McCormick	A	<i>Newport</i>
Helen Cunyes MacNaught	A	<i>Woods Hole, Mass.</i>
Florence Josephine Maguire	P	<i>East Boston, Mass.</i>
Ruth Wilmarth Marvel	A	<i>Rehoboth, Mass.</i>
Helen Agnes Mauran	A	<i>Newport</i>
Florence Goff Moulton	P	<i>Pawtucket</i>
Dorothy Thayer Mowry	A	<i>Woonsocket</i>
Gladys May Mowry	A	<i>Oneco, Ct.</i>
Miriam Nagle	A	<i>Providence</i>
Eleanore Woodward Parmelee	P	<i>Providence</i>
Ruth Elizabeth Parsons	A	<i>Woonsocket</i>
Dorothy Frink Patton	A	<i>Milton, Mass.</i>
Eva Rabinovitz	A	<i>Woonsocket</i>
Helen Elizabeth Ramsbottom	A	<i>Pawtucket</i>
Cora Gwendolyn Redding	A	<i>Wilmington, Del.</i>
Edythe Florence Reeves	A	<i>Providence</i>
Beatrice May Richards	P	<i>Auburn</i>
Emilia Eleanore Robison	P	<i>Schenectady, N. Y.</i>
Ethel Dean Rounds	A	<i>Franklinville, N. Y.</i>
Bella Rubinstein	A	<i>Providence</i>
Ida Rubinstein	P	<i>Providence</i>
Mary Elmira Schroeder	A	<i>Reading, Pa.</i>
Joanna Monica Shea	P	<i>Brockton, Mass.</i>
Evelyn Ray Sheehan	A	<i>Revere, Mass.</i>
Grace Shein	A	<i>Providence</i>
Dorothy Simpson	A	<i>Howard</i>
Bernice Grace Smith	A	<i>Providence</i>
Carolyn Rebecca Smith	P	<i>Reading, Pa.</i>
Dorothea Alice Smith	A	<i>Providence</i>
Elizabeth Thatcher Stafford	P	<i>Providence</i>
Mildred Alberta Stevens	P	<i>Nasonville</i>
Nellie Clayton Stokes	A	<i>Providence</i>
Elsie Pauline Swanson	P	<i>Crompton</i>

BROWN UNIVERSITY

NAME		RESIDENCE
Belmira Evelina Tavares	A	<i>Fall River, Mass.</i>
Muriel Theresa Tierney	A	<i>Providence</i>
Doris Ethel Watts	A	<i>Springfield, Mass.</i>
Sarah Eleanor Wells	A	<i>Providence</i>
Olive Greene Wildes	P	<i>Auburn</i>
Catherine Veronica Winsper	P	<i>New Bedford, Mass.</i>
Maude Ella Wishart	P	<i>Fall River, Mass.</i>
Alice Montgomery Wright	P	<i>Edgewood</i>
Frances May Wright	A	<i>Palmer, Mass.</i>
Dorothy Wood	A	<i>Edgewood</i>

SPECIAL STUDENTS

Sarah Minchen Barker		<i>Providence</i>
Helene Martha Boll		<i>Providence</i>
Mildred Eleanor Carlen		<i>Providence</i>
Tula Pearl Curry		<i>Hamilton, Texas</i>
Ruth Carver Emory		<i>Providence</i>
Edna Rhodes Gardiner		<i>Providence</i>
Marie Emelie Gaudette		<i>Providence</i>
Veronica Frances Holland	B. E.	<i>Providence</i>
Marion Sieverts Holland		<i>Saunderstown</i>
Christine Elizabeth Lemmo		<i>Media, Pa.</i>
Helen Agnes Luddy	B. E.	<i>Pawtucket</i>
Susanna Adeline Matteson	B. E.	<i>Auburn</i>
Ruth Holmes Rundell		<i>Buffalo, N. Y.</i>
Elizabeth Houghton Wheeler		<i>Cape Elizabeth, Me.</i>
Frances Semle		<i>Providence</i>
Edwina Hutton Woods		<i>Brookline, Mass.</i>

APPENDIX

THE RHODE ISLAND ALPHA OF THE PHI BETA KAPPA SOCIETY ‡ WOMEN'S ORGANIZATION

President: Miss EMMA B. STANTON.

Vice-President: Miss MARION S. COLE.

Secretary-Treasurer: Mrs. HENRY B. HATHAWAY.

Committee on Arrangements: Miss SUSAN S. BRAYTON, *Chairman*, Miss ANNE W. CARPENTER, Mrs. WILLIAM H. EDDY.

WOMEN ELECTED IN 1919

Seniors: ESTHER ELIZABETH BRINTZENHOFF, HAZEL DADMUN HARTWELL, MARY GLADYS MAHONEY, MIRIAM FERN NUZUM.

Juniors: RACHEL TUPPER ESTERBROOKS, FRANCES MORRILL MERRIAM, ROSA LEE SCHNEIDER.

THE BROWN CHAPTER OF THE SOCIETY OF THE SIGMA XI§

THE ALUMNAE ASSOCIATION OF BROWN UNIVERSITY

OFFICERS FOR 1919-20

President: Mrs. HORACE G. BISSELL, '95, Providence.

Vice-President: Miss LAURA RICHARDS SHERMAN, '06, Providence.

Recording Secretary: Mrs. JAMES PEARSE, '99, Providence.

Corresponding Secretary: Miss ALICE F. HILDRETH, '11, 24 Medway Street, Providence.

Treasurer: Miss FLORA M. COTTON, '04, 16 Humboldt Avenue, Providence.

ALUMNAE CLUBS

NEW YORK. *President*, Miss Margaret Roys, '03. *Vice-President*, Miss Ann Thomas, '12. *Treasurer*, Miss Emma D. Lee, '09. *Secretary*, Miss Marion S. Stone, '12, 414 West 118th Street, New York City.

‡ See page 231.

§ See page 232.

BOSTON. *President*, Miss Elizabeth Eaton, '09. *Vice-President*, Mrs. G. B. Rugg, '99. *Recording Secretary and Treasurer*, Mrs. Arthur E. Norton, '00. *Corresponding Secretary*, Miss Charlotte Huntoon, *sp.* '12, 161 South Huntington Avenue, Boston.

CONNECTICUT VALLEY. *President*, Mrs. Andrew S. Thomson, '99. *Vice-President*, Mrs. C. Wilbur Cary, '96. *Secretary-Treasurer*, Miss Asenath Tarr, *sp.* '10, 188 Sumner Avenue, Springfield, Mass.

ALBANY. *President*, Mrs. Frank D. Easterbrooks, '96. *Secretary*, Miss Lucy E. Bourn, '15, Albany Hospital, Albany, N. Y.

WASHINGTON. *President*, Miss Lena R. Lopiansky, '17. *Vice-President*, Miss Winifred C. Wetherbee, '17. *Secretary-Treasurer*, Miss Margaret B. Church, '12. *Corresponding Secretary*, Miss Bertha A. Payson, '11, The Iowa, Washington, D. C.

PUBLICATIONS

THE WOMEN'S COLLEGE BOOKLET

Published by the College.

A pamphlet with illustrations. Address the Registrar, Pembroke Hall, Providence.

THE ALUMNAE RECORD

Published semi-annually by the Alumnae.

Address the Registrar, Pembroke Hall, Providence.

SUMMARY OF REGISTRATION

January, 1920

GRADUATE STUDENTS

Men	69
Women	34
	<hr/>
	103

UNDERGRADUATE MEN

Seniors	180
Juniors	179
Sophomores	219
Freshmen	280
Special Students	81
	<hr/>
Total	939

THE WOMEN'S COLLEGE

Seniors	48
Juniors	50
Sophomores	60
Freshmen	94
Special Students	16
	<hr/>
Total	268

GENERAL SUMMARY

Graduates	103
Undergraduate Men	939
Women's College	268
	<hr/>
	1310
Deduct for names counted twice	6
	<hr/>
Total	1304
Registered in Extension Courses, first semester, 1919-20, and not included above	801
	<hr/>
Total number of persons receiving instruction from the University	2105

DIRECTORY OF OFFICERS AND STUDENTS

The addresses given are in Providence, unless otherwise stated. If an officer is on leave of absence for the year, his name is bracketed. The following abbreviations are used: *Fr.* = Freshman; *So.* = Sophomore; *Jr.* = Junior; *Sr.* = Senior; *Sp.* = Special Student; *Gr.* = Graduate Student; *W.* = Women's College; *J. C. B. L.* = John Carter Brown Library; *H.* = Hope College; *U.* = University Hall; *S.* = Slater Hall; *M.* = Maxcy Hall; *C.* = Caswell Hall; *B.* = Brunonia Hall; 65 College = 65 College Street, Providence, etc. Where no state is mentioned, Rhode Island is to be understood. The number *precedes* the name of a street, but *follows* the name of a building.

ABBOTT, A. L., <i>Trustee</i> 415 Pine, St. Louis, Mo.	Alden, E. R., <i>Fr.</i> 238 Williams
Abbott, C. F., <i>Sr.</i> 104 Waterman	Aldrich, Miss D. D., <i>Gr.</i> 290 California Ave.
Abbott, D. M., <i>W. So.</i> 98 Comstock Ave.	Allen, D. E., <i>W. So.</i> 852 Elmwood Ave.
Abbott, I. R., <i>W. So.</i> 18 Halsey	Allen, F. A. R., <i>Sr.</i> 48 College
Abbott, P. O., <i>Jr.</i> 54 College	Allen, F. O., Jr., <i>Fr.</i> 265 Waterman
ABERCROMBIE, D. W., <i>Trustee</i> Worcester, Mass.	Allen, G. F., <i>Sp.</i> 176 President Ave.
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ADAMS, C. R., <i>Gr., Instr.</i> 17 Glenwood Ave., Eden Park	Allen, R. W., <i>So.</i> Wickford
Adams, G. H., <i>Jr.</i> 56 Waterman	ALLINSON, F. G., <i>Prof.; Director of</i> <i>Museum of Fine Arts</i> 163 George
Adams, R. P., <i>Fr.</i> U. 31	ALLINSON, Mrs. F. G., <i>Adv. Coun-</i> <i>cil, W.</i> 163 George
Adams, V. F., <i>Sr.</i> 65 Prospect	Allison, R. F., <i>Jr.</i> 56 Warren Ave., E. Providence
Addeo, A., <i>Sr.</i> 613 Douglas Ave.	Almfeldt, J. E., <i>Gr.</i> 100 Prairie Ave.
Addoms, R. M., <i>Fr.</i> S. 8	Almy, R., <i>Fr.</i> 25 Fenner, Auburn
Affleck, G. B., <i>Jr.</i> 4 Manning	Ames, G. C., <i>Sr.</i> 41 George
AHLERS, Mrs. M. G., <i>Director of</i> <i>Grounds and Buildings, W.</i> 77 Lloyd Ave.	Ames, T. W., <i>Jr.</i> 56 Waterman
Ahlquist, A. A., <i>Gr.</i> Comstock Ave.	Andersen, C. V., <i>Jr.</i> 80 Waterman
Akeley, T. B., <i>Fr.</i> U. 45	Anderson, T. C., <i>Fr.</i> U. 40
Albright, J. W., <i>Jr.</i> 54 College	ANDERSON, T. D., <i>Fellow; Sec'y of Cor-</i> <i>poration</i> 2 Wellington Ter., Brookline, Mass.

- Anderson, W. R., *Sr.* 56 Waterman
 Andrews, J. M., *Fr.* U. 40
 Andrews, M., *W. Fr.* 98 Cushing
 Anibal, W. G., *Fr.* 40 Angell
 Appel, M. C., *W. Fr.* 98 Cushing
 Appel, S. B., *W. Fr.* 98 Cushing
 Appleby, C. H., *Fr.* C. 15
 Applegate, J. B., *Fr.* 259 Benefit
 APPEGET, T. B., *Executive Secretary*
 175 Thayer
 APPLETON, J. H., *Prof. Emeritus*
 209 Angell
 Appleton, R. A., *So.* 48 College
 ARCHIBALD, R. C., *Assoc. Prof.*
 9 Charles Field
 Armstrong, D. D., *Fr.* 235 Butler Ave.
 Armstrong, E. G., *Jr.* 54 College
 Armstrong, F. K., *So.* 96 Waterman
 Armstrong, M., *W. Sr.*
 38 King, Manton
 Arnold, E. M., *Sp.* 96 Waterman
 Arnold, Miss I. E., *Gr.* 468 Plainfield
 ARNOLD, S. T., *Asst. Prof.*
 175 Thayer
 Ashbey, G. R., *Jr.* No. S.
 ASHTON, J. H., *Asst. Supt. Grounds*
and Buildings 46 Pitman
 Atherton, T. R., *Fr.* 114 George
 Atkins, L. P., *Sr.* U. 50
 ATWATER, R. M., *Trustee*
 Chadds Ford, Pa.
 Augur, F. E., *Fr.* C. 31
 Aumack, D. M., *Sr.* 104 Waterman
 Avery, H. B., *W. Fr.* 63 Marshall
 Axt, A. E., *Gr.* 119 Waterman
 Aylsworth, H. C., *Sr.* 104 Waterman
 Babcock, C., *Fr.* 129 Waterman
 Bailey, H. M., *Jr., Sr.* 81 Waterman
 Bailey, M. R., *W. Fr.*
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 Baker, G. L., *W. Fr.* 125 Governor
 Baker, W. E., *So.* 249 Potter Ave.
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 Barrows, P. A., *W. Jr.* 90 Chapin Ave.
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 Barton, M. D., *W. Fr.* 98 Cushing
 Barton, N. F., *W. Fr.* 118 Cushing
 BARUS, C., *Prof.; Dean of Graduate*
Dept. 30 Elmgrove Ave.
 BARUS, Mrs. C., *Adv. Council, W.*
 30 Elmgrove Ave.
 Bassett, Miss M. E., *Gr.* 147 Waverly
 Bateman, R., *W. Fr.* 118 Cushing
 Bates, M. M., *So.* 65 College
 Bauer, G. M., *W. Fr.*
 Locust, Attleboro, Mass.
 Baurenfeind, F., *So.* 108 Waterman
 Beagan, E. F., *Sr.* C. 24
 Beagan, J. E., *So.* C. 24
 Beagan, J. G., *Jr.* C. 24
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 Beattie, C., *Fr.* U. 53
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 Becket, W. F., *Sp.* 128 Cushing
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 Beede, F. N., *Fr.* M. 434
 Beers, E., *W. Fr.* 180 Doyle Ave.
 Bellmore, R. V., *Fr.* M. 425
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 Bennett, C. E., *Fr.*
 17 Tyler, Lakewood
 Bennett, D. W., *W. Sr.*
 157 Olney Ave., No. Providence
 Bennett, E. J., *Fr.*
 157 Olney Ave., No. Providence

- Bennett, M. K., *Sr.* S. 2
 Berger, S. H., *Sp.* 76 Benefit
 Berryman, W. P., *So.* 108 Waterman
 Besser, R. W., *Sr.* 65 Prospect
 Bevis, A., Jr., *Fr.* C. 1
 Bichwit, G., *Jr.* 183 Benefit
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 Bishop, M. P., *Jr.* 108 Waterman
 Bishop, N. W., *Fr.* 257 High, Pawtucket
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 Bjorklund, C. A., *Jr.* 106 George
 Black, L. W., *Sr., Gr.* 81 Waterman
 Black, S. T., *Jr.* 41 George
 Blake, K. P., *Fr.* C. 5
 Blake, M. B., *W. Sr.* 88 Hudson
 Blake, W. B. I., *So.* 104 Waterman
 BLANCHARD, Miss E. R., *Ref. Librarian* 591 Angell
 Blanchard, H. B., *Gr.* 67 West Ave., Pawtucket
 Bland, J. R., *So.* S. 1
 Bleakney, R. G., *Fr.* C. 9
 Bliss, A. E., *W. Jr.* 35 Boylston Ave.
 Blocher, P. B., *So.* 108 Waterman
 Bloom, I., *So.* 30 Lippitt
 Bogle, R. A., *Sr.* 81 Waterman
 Bonoff, L. E., *So.* 183 Benefit
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 Borden, P. P., *Jr.* 81 Waterman
 Borneman, H. J., *Gr.* 259 Benefit
 Boughton, P. E., *Fr.* M. 428
 Boureau, H. N., *Jr.* 80 Waterman
 Bowen, E. H., *Fr.* C. 27
 Bowen, E. S., *W. Sr.* 118 Cushing
 Boyd, B. S., *Sp.* C. 7
 Boyd, D. G., *Fr.* C. 7
 Boyd, D. P., *So.* 56 Waterman
 Boyd, K. V., *W. So.* 55 Faith
 Boyes, K. R., *Sp.* 137 Congress Ave.
 Boylan, A. C., *W. Fr.* 167 Chapin Ave.
 Boylan, I. E., *W. Fr.* 52 Camp
 Brace, G. W., *Sr.* 15 University Ave.
 Brack, F. W., *So.* 56 Waterman
 Bradford, L. W., *W. So.* 680 Hope, Bristol
 Brady, E. C., *Fr.* 76 Armstrong Ave.
 Brady, P. T., Jr., *Jr.* 54 College
 Braitsch, C. A., *Fr.* U. 26
 Bratcher, E. C., *Fr.* 279 Benefit
 BRATCHER, M. E., *Lecturer* 38 Benevolent
 Breslin, J. E., *Jr.* 1494 Broad
 Brewer, H. G., *Jr.* H. 28
 Briggs, H. O., *Fr.* H. 36
 Briggs, O. F., *W. Jr.* 129 Hope
 Brigham, F. D., *Sr.* 80 Waterman
 Brightman, W. T., Jr., *Jr.* 81 Waterman
 Brindle, L., *W. Fr.* 98 Cushing
 Brintzenhoff, H. S., *W. So.* 98 Cushing
 Brisk, A. L., *Sr.* C. 33
 Broadbent, H. T., *Jr.* 119 Waterman
 Broking, G. E., *Fr.* C. 5
 Bromage, W. H., *So.* H. 25
 BRONSON, W. C., *Prof.* 140 Morris Ave.
 BRONSON, Mrs. W. C., *Adv. Council, W.* 140 Morris Ave.
 Brooks, A. C., *Jr.* 54 College
 BROOKS, J. A., *Assoc. Prof.* 612 Angell
 BROWN, C. W., *Assoc. Prof.* 37 Barnes
 Brown, D. P., *Fr.* U. 34
 Brown, E. M., *Jr.* 48 College
 Brown, F. G., *Jr.* 65 Prospect
 Brown, K. B., *So.* H. 47
 BROWN, L., *Trustee* 16 Warren, Norwich, Ct.
 Brown, M. C., *Jr.* H. 15
 Brown, M. H., *Sr.* U. 21
 Brown, M. S., *W. Fr.* 98 Cushing
 Brown, P. C., *Fr.* 157 Bath

- Brown, P. M., *So.* 93 Wood
 Brown, R. D., *So.* M. 323
 BROWN, R. P., *Trustee*
 13 Charles Field
 Brown, R. S., *So.* 54 College
 Brown, R. S., *W. Sr.* 118 Cushing
 BROWN, T. H., *Asst. Prof.*
 79 Taber Ave.
 BROWNING, R. E., *Asst.*
 88 Massachusetts Ave.
 Bryant, D. E., *W. Jr.*
 156 Chapel, Saylesville
 Buerhaus, W. R., *Jr.* 175 Thayer
 BUCKLIN, H. S., *Asst. Prof.*
 135 Glenwood Ave., Pawtucket
 BUGBEE, R. G., *University Physician*
 223 Thayer
 Bugbee, R. M., *W. Fr.*
 53 Edgewood Ave., Edgewood
 Bulkeley, W. L., *So.* 48 College
 Bullock, E. A., *So.*
 40 Washington, Central Falls
 BUMPUS, H. C., *Fellow*
 Boston, Mass.
 Bumpus, L. D., *So.* No. S.
 Burby, L. J., *Fr.* H. 38
 Burdick, S. A., *Sr.* 104 Waterman
 Burdon, K. L., *Gr.* 102 Mitchell
 Burgess, H. E., *W. So.* 118 Cushing
 BURGESS, R. W., *Asst. Prof.*
 65 Charles Field
 Burgh, R., *So.* H. 25
 Burke, T. F., *Jr.* 16 Berndt, Pawt.
 BURLINGAME, E. A., *Comptroller; Supt.*
Grounds and Buildings 15 Manning
 Burr, C. E., *Gr.* 54 Lauriston
 Burr, G. F., *Jr.* H. 24
 BURRAGE, H. S., *Fellow*
 Kennebunkport, Me.
 Burrell, R. C., *Fr.* C. 2
 Burse, W. M., *Sr.* 257 Hope
 Burt, R. U., *W. Fr.* 53 Grace, Auburn
 Bush, T. H., *Jr.* C. 27
 BUSSELL, Miss N. E., *Instr., W.*
 98 Cushing
 Buswell, F. W., *Jr.* 96 Waterman
 Butler, A. P., *W. Sr.*
 32 Gooding, Pawt.
 Butler, W. H., *Fr.* C. 18
 Butterfield, H., *Sr.* 253 Broadway
 BUTTERWORTH, J., *Jr., Gr. Asst.* U. 18
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 Ave., Fall River, Mass.
 Cahill, R. F., *Fr.* C. 19
 Caldow, J. R., *Sr.* 175 Thayer
 Cali, F., *Gr.* 605 Branch Ave.
 Cambio, C. T., *Jr.* 22 Africa
 Campbell, A. A., *W. Fr.* Crompton
 Campbell, F. I., *W. Jr.* Phenix
 Campbell, H. A., *Sr.* 104 Waterman
 Campbell, J. H., *So.* 57 Waterman
 Campbell, J. W., *Fr.*
 172 Park Ave., Edgewood
 Campbell, M., *So.* 65 Prospect
 Campbell, R. E. E., *Gr.*
 1547 Westminster
 Campbell, W. R., *So.* 175 Thayer
 Cannell, M. H., *So.* 168 Medway
 Cantor, M., *Jr.* 183 Benefit
 CAPRON, Miss B. G., *Sec'y to Dean, W.*
 152 Elmgrove Ave.
 CAPRON, Miss F. E., *Sec'y to Dean*
 152 Elmgrove Ave.
 Caputi, A. S., *Jr.* 65 Prospect
 CAPWELL, Miss C. E., *Keeper of Grad-*
uate Records 16 Creighton
 Capwell, H., *W. So.* 16 Creighton
 Card, L. E., *Jr.* 96 Waterman
 Carey, G. L., *Sp.* 169 Meeting
 Carey, H. F., *Sr.* 169 Meeting
 CARLBORG, Miss E. M. L., *Special Cat-*
aloguer 124 Atlantic Ave.
 Carlen, E. M., *W. Fr.* 75 Raymond
 Carlen, L. H. N., *W. Jr.*
 75 Raymond

- Carlen, M. E., *W. Sp.* 14 Mansfield
 Carleton, P. D., *Sr.* U. 50
 Caron, A. L., *Sr.* 108 Waterman
 Carr, D. M., *W. Fr.* 98 Cushing
 Carr, G. H., *Jr.* 96 Waterman
 Carr, R. N., *Fr.* S. 8
 Carrigan, R. E., *Fr.* 68 Forbes
 Carter, J. F. S., *Fr.* 297 Thayer
 Cawl, F. R., *Gr.* 286 Lloyd Ave.
 CHACE, A. B., *Trustee; Chancellor*
 99 Power
 Chace, D., *W. Jr.* 235 Broadway
 CHAFEE, Z., *Trustee* 5 Cooke
 Chaffee, H. A., *So.* H. 29
 Chalmers, P. M., *So.* 195 Benefit
 Chaloux, E. J., *Fr.* U. 53
 CHAMBERS, R. F., *Asst. Prof.*
 104 Irving Ave.
 Champlin, J. C., *Sp.* 65 College
 Chandler, R. P., *W. Sr.* 118 Cushing
 Chandler, W. T., *So.* H. 20
 Chapman, H. E., *Sp.*
 148 Linwood Ave.
 Chapman, J. W., *Jr.* 104 Waterman
 Chapman, L. E., *So.* 96 Waterman
 Chase, M. F., *W. Sr.* 24 Phillips
 Chase, N. B., *Sp.* M. 434
 Chase, R. R., *Jr., Sr.* 45 Waterman
 Cheetham, M. E., *W. Fr.* 43 E. George
 Chesebro, J. A., *So.* 81 Waterman
 Chesley, F. L., *Gr.*
 13 No. Fair, Edgewood Sta.
 Chew, J., *W. Fr.*
 374 Anawan, Fall River, Mass.
 CHICK, A. C., *Instr.* 261 Thayer
 Chick, L. S., *So.* C. 29
 Childs, H. E., *Gr.*
 267 Sutton Ave., E. Prov.
 Chinn, C. W., *Sr.*
 14 Shore Rd., Riverside
 Claffin, R. E., *Sr.* 56 Waterman
 Cleveland, N. C., *Sp.* No. S.
 Cline, S. S., *Jr.* 65 College
 Clough, C. G., *Fr.*,
 511 Warwick Ave., Lakewood
 Clough, E. T., *Sr.* 175 Thayer
 Cochrane, E. G., *Jr.* 333 Friendship
 Coe, S. R., *Fr.* U. 54
 Coggeshall, A. G., *W. Fr.*
 117 Constitution, Bristol
 Coggeshall, A. S., *W. So.* Bristol
 Coggeshall, D. W., *Jr.* 56 Waterman
 Cohen, C. L., *Jr.* 9 Belair Ave.
 Cohen, M. L., *Jr.* 7 Bugbee Court
 Colburn, A. D., *Fr.* C. 9
 Colby, A. B., *Jr.* 54 College
 COLBY, E., *Trustee*
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 Cole, A., *W. Fr.* 118 Cushing
 Cole, C. H., *Sp.* 48 College
 Cole, E. A., *Jr., Fr.* C. 4
 Coleman, H. F., *Sr.* 154 Taber Ave.
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 COLLINS, A. C., *Trustee*
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 COLLINS, G. L., *Trustee* 22 Angell
 COLLINS, J. F., *Demonstrator*
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 Colton, K. E., *W. So.* 463 Pine
 COLVIN, S. S., *Prof.* 372 Lloyd Ave.
 Colwell, R. C., *Gr.*
 805 Hartford Ave., Johnston
 Comstock, H. W., *Fr.* C. 34
 Connelly, H. J., *Jr.* 115 Waterman
 Connelly, J. F., *Fr.* U. 30
 Connett, E. F., *So.* 103 Williams
 Connett, H. S., *Fr.* H. 44
 Conzelman, C. M., *So.* 65 Prospect
 Cook, R. E., *Sr.* 119 Waterman
 Cook, S. P. W., *So.* 405 Angell
 Coolidge, R. H., *Jr.* 56 Waterman
 Cooney, E. A., *Sp.* C. 24
 Coons, R. B., *Fr.* 4 Manning
 Cooper, H., *W. Jr.*
 900 Pleasant, Attleboro, Mass.

- Cooperstein, S., *W. Fr.* 118 Cushing
 Copeland, R. W., *So.* 65 Prospect
 Copp, M. F., *W. Fr.* 54 Jackson
 Corcoran, L. M., *Jr.* C. 26
 Corcoran, T. G., *So.* 26 Sanford, Pawt.
 Cordingley, R. W., *Fr.* C. 2
 Cordts, J. N., *Fr.* 34 George
 Coulter, B. N., *Sr.* 56 Waterman
 Covell, J. H., *Sr.* H. 13
 Cox, P. H., *Fr.* M. 320
 Craig, G. M., *W. Fr.* 118 Cushing
 Craig, M. E., *W. So.* 118 Cushing
 Crapo, L. L., *W. Jr.* 118 Cushing
 Crawford, W. F., *Jr.* 15 Park, Pawt.
 Crawford, W. H., *Jr.* No. S.
 Crockett, I. I., *W. So.* 98 Cushing
 Crompton, I. S., *Sr.* 41 George
 Crosby, P. R., *Gr.* 110 North Bend, Pawt.
 CROSBY, T., *Assoc. Prof.* 123 Waterman
 Crosby, T. C., *So.* 259 Benefit
 Crossley, B. L., *W. So.* 1366 Broad
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 Crowell, A. F., *Gr.* 274 Benefit
 Crowell, M. J., *Gr.* 286 Benefit
 Crowther, C. T., *So.* 56 Waterman
 Cruise, R. B., *Jr.* 3 De Foe Pl.
 Csepely, J. A., *Jr.* 388 Valley
 Cuddeback, C. E., *Jr.* 108 Waterman
 Cummings, H. C., *So.* C. 26
 Cummings, M. M., *W. Fr.* 77 Taber Ave.
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 Curry, A. J., *So.* 250 Cypress
 Curry, G. T., *Sr.* 250 Cypress
 Curry, P. M., *Gr.* 161 Benefit
 Curry, T. P., *W. Sp.* 161 Benefit
 Curtis, D. H., *Sr.* 80 Waterman
 Curtis, K. M., *W. Fr.* 98 Cushing
 Cushing, H. A., *W. Sr.* 109 Smithfield Road, No. Prov.
 Cushman, M. W., *W. Jr.* 118 Cushing
 Cushman, W. M., *Sp.* H. 20
 Cutler, J. J., *Fr.* 134 Benefit
 Dalton, J. M., *Sp.* 383 Benefit
 DAMON, L. T., *Prof.* 31 Benevolent
 Damon, S. R., *Gr.* Arnold Laboratory
 Dana, G. I., *Fr.* M. 432
 Daniels, F. I., *Sp.* U. 59
 Daniels, W. M., *So.* 8 Grotto Ave.
 da Rosa, J. C., *Gr.* 2803 Pawtucket Ave., E. Prov.
 Davies, A. M., *So.* U. 25
 DAVIS, Miss B. N., *Director of Chapel Music, W.* 8 Hamilton
 Davis, C. E., *Jr.* No. S.
 DAVIS, N. F., *Prof. Emeritus* Ash, Cambridge, Mass.
 Davis, P. W., *Sr.* 49 Wilson
 Davis, S. L., *Jr.* 65 College
 DAVISON, H. F., *Asst. Prof.* 41 Sumner, Pawt.
 Davitt, A. A., *W. Jr.* 19 Arch
 Dawson, E. D., *So.* 70 Clarence
 Dawson, G., *Jr., So.* 36 Lillian Ave.
 Day, C. R., *Fr.* U. 52
 Day, E. W., *So.* 26 Brooks, Cranston
 Day, L. S., *So.* H. 41
 Day, M. A., *W. Sr.* 100 Elmgrove Ave.
 Deady, H. E., *So.* 17 Woonasquatucket Ave.
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 Dealey, J. Q., *Jr., Sr.* 872 Hope
 Decker, E. J., *Fr.* 108 Waterman
 Decker, G. R., *Fr.* 108 Waterman
 Dedrick, W. L., *Jr.* 56 Waterman
 De Filippis, M., *Jr.* U. 16
 de Goey, C. R., *So.* 40 Larch

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 Dempsey, C. T., *Fr.* H. 40
 Denison, C. H., *Sr.* 56 Waterman
 De Robbio, M., *W. Sr.*
 433 Union Ave.
 De Simone, D. T., *Fr.* 124 Almy
 Desmond, A. E., *W. Fr.*
 22 Overhill Rd.
 Destremps, L. L., *So.* C. 24
 Devine, F. H., *W. Fr.* 118 Cushing
 Deware, B. E., *Sp.* 41 George
 Dewart, W. L., Jr., *Sr.* 4 Manning
 Dewey, R. K., *Jr.* 56 Waterman
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 Dick, J. B., *So.* 56 Waterman
 Dick, M. S., *W. Fr.* 118 Cushing
 Dickinson, M. G., *W. So.*
 118 Cushing
 Dighton, W., *Fr.* C. 3
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 175 Thayer
 Dimick, Miss A., *Gr.*
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 Dimitroff, V. T., *Jr.* City Hospital
 Dine, N., *Fr.* M. 426
 DODGE, C. W., *Instr.* 238 Gano
 Dodge, H. A., *Jr.* 108 Waterman
 Dolbeare, W. I., *Fr.* U. 30
 Doll, C. G., *So.* 973 Douglas Ave.
 Dolloff, G. R., *Gr.* Natick
 Doody, C. J., Jr., *Fr.* 270 Benefit
 Dore, S. M., *Sr.* 119 Waterman
 Dorer, J. R., *Jr.* 54 College
 Dorin, J., *Sr.* S. 1
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 DOUGLAS, W. W., *Trustee*
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 Dove, W. B. K., *Sr.* 96 Waterman
 Dow, Miss L. C., *Gr.*
 33 Denver, Pawt.
 Downey, W. B., *Sr.* 175 Thayer
 Dows, A. J., *Gr.* 56 Waterman
 DOYLE, Miss S. E., *Adv. Council, W.*
 119 Prospect
 Doyle, T. W., *So.* 129 Rochambeau
 Driscoll, C. L., *Sr.* 119 Waterman
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 184 Waterman
 Dube, R. F., *Fr.*
 555 Middle, Fall River, Mass.
 Du Bois, J. E., *So.* 54 College
 Dunham, C. L., Jr. 81 Waterman
 DUNNING, J. C., *Asst. Prof.*
 219 Benefit
 Durfee, A. C., *So.* 81 Waterman
 Durfey, F. B., 2d, *Fr.* H. 1
 Dustin, T. B., *Fr.* M. 436
 Earl, M. L., *W. So.* 98 Cushing
 Easterbrooks, R. T., *W. Sr.*
 125 Governor
 Eastman, H. G., Jr. 175 Thayer
 Eddy, C. B., Jr. 52 Taber Ave.
 Eddy, C. M., *So.* 25 Payton
 Eddy, F. G., *W. Jr.* 25 Payton
 Edgcomb, A. A., *So.*
 234 Mauran Ave., E. Providence
 Edmonds, J. G., *So.* H. 39
 Edson, N. W., 2d, Jr. 54 College
 Edwards, H. M., *So.* C. 14
 Eisenberg, G., *W. Jr.*
 15 Humes, Pawt.
 Eisenberg, J. S., *Fr.*
 995 Social, Woonsocket
 EKSTROM, C. E., *Instr.* 70 Seamans
 Ellis, A. H., *Fr.* C. 21
 Ellsworth, H. L., *So.*
 2055 Broad, Edgewood
 Ely, L. C., Jr. 4 Manning
 Ely, W. G., Jr., *Sr.* 4 Manning
 Elmendorf, L. C., *Fr.* U. 34
 Emery, C. L., *Fr.* U. 52
 Emmott, R. H., *So.* 48 College

Emory, R. C., *W. Sp.*
88 Mt. Hope Ave.

Engaletcheff, V. N., *Fr.* C. 1

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Eteson, F. C., *So.* 48 College

EVERETT, W. G., *Prof.* 550 Broad

Ewart, E., *W. Fr.* 33 Larch, Pawt.

Fairweather, M. L., *W. Fr.*

83 Fourth

Fales, H. L., *Fr.* U. 51

Familton, H. S., *Fr.* 283 George

Fanning, C. T., *W. Fr.* 22 Hart

Farrell, G. P., *Jr.* 193 Summit, Pawt.

Farrell, I. A., *Sr.*

180 Hedley Ave., Central Falls

Farrell, R. J., *So.*

180 Hedley Ave., Central Falls

Fasteson, G. E., *Sp.* 178 Angell

Faulkner, H. A., *Jr.* H. 24

Faulkner, H. R., *Fr.* S. 3

FAUNCE, W. H. P., *President*

180 Hope

Faunce, W. M., *Jr.* 56 Waterman

Fawcett, J. E., *So.* 4 Manning

Feely, P., *Fr.* C. 13

Feiner, A. H., *So.* 14 Star

Feldman, A., *So.* 20 No. Davis

Feldman, D. M., *So.* U. 48

Fellows, L. B., *So.* 104 Waterman

Fenner, W., *Jr., Fr.* 146 Bridgman

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369 Broad

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195 Morris Ave.

Finegold, P., *Fr.* 53 Douglas Ave.

Finkelstein, R. M., *W. So.*
125 Governor

Fish, C. J., *Jr.* 81 Waterman

Fish, F. C., *Sp.* 22 Atlantic Ave.

Fisher, J. L., *Fr.* 130 Mitchell

Fisher, R. J. C., *Gr.* U. 57

Fitzgerald, A. L., *Fr.* H. 35

Fitz Gibbon, W. J., *Jr.* 65 College

Fletcher, E. A., *W. So.* 98 Cushing

Flumere, J. M., *W. Fr.* 118 Cushing

Fontaine, L. E. A., *Fr.* 940 Broad

Foote, L. R., *Jr.* 41 George

Forbis, R., *Sp.* 96 Waterman

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Forstall, W. C., *So.* 4 Manning

Fosdick, R. H., *Fr.* C. 19

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braries 64 Beckwith, Auburn

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Fox, A. S., *Fr.* U. 31

Frant, I., *W. Jr.* 98 Cushing

French, J. G., *So.* 4 Cory

Frey, A. J., *So.* U. 60

Fuller, D. O., *Jr.* 54 College

Fuller, Miss M. A., *Gr.*

79 Charles Field

Fuller, R. C., *Sp.* 80 Waterman

Fulton, M. N., *Sr.* 273 Bowen

Gäerste, J. L., *Fr.* 270 Benefit

Gaffney, A. A., *So.* 64 College

GAIR, S. R., *Gr., Asst.* U. 32

Gale, G. E., *Jr., So.* C. 30

Gallivan, H. F., *W. So.* 83 Sorrento

Gallup, H. E., *Jr.* 104 Waterman

Gallup, L. E., *Sp.* 56 Waterman

GAMMELL, W., *Trustee* 170 Hope

Gardiner, E. R., *W. Sp.* 156 Cypress

- GARDNER, H. B., *Prof.*
54 Stimson Ave.
- Gardner, H. S., *Fr.* Blackstone, Mass.
- Gardner, R. L., *Fr.* U. 13
- Gardner, W. R., *Sr.* 54 Stimson Ave.
- Garland, C. G., *Fr.* 73 Holden
- Gast, P. R., *Sr.* U. 44
- Gates, G. H., *Fr.* U. 47
- Gates, L. O., *Jr.* 41 Angell
- Gates, M. R., *W. Sr.* 14 Kenwood
- Gaudette, M. E., *W. Sp.* 44 Jewett
- Gavigan, G. G., *W. Fr.*
416 Whipple, Fall River, Mass.
- Gavitt, L. E., *Sp.* No. S.
- Gerstenlauer, R., *So.*
107 Congress Ave.
- Gifford, S. B., *Sr.* 60 Charles Field
- Gifford, W. B., *Fr.*
547 Elmwood Ave.
- Gilbert, H. G., *Jr.* 104 Waterman
- Gilchrist, B. S., *So.* 108 Waterman
- Gilchrist, D. D., *Jr.* 64 College
- GILMAN, R. E., *Asst. Prof.* 654 Hope
- Gipfel, P. A., *Jr.* 13 Kirk
- Girvin, R. H., *Jr.* *Fr.*
39 Rand, Central Falls
- Giura, A., *Jr.* S. 7
- Gleason, K. P., *Fr.* C. 18
- Glover, M. H., *So.* 81 Waterman
- Goetz, J. B., *Sp.* C. 23
- Goff, L. B., *So.* 276 Benefit
- Goff, L. B., *Fr.* 286 Benefit
- Gogreve, A., *Sp.* 65 College
- Goldberg, L., *Jr.* 13 Kirk
- Goldstein, E., *Fr.* 114 Pratt
- Golrick, M. A., *Jr.* *Jr.* 17 Woodman
- Gonzalez, G. E., *Fr.* 304 Benefit
- Goodall, A. R., *Fr.* C. 31
- Gordon, B. M., *Sr.* 65 Prospect
- GORHAM, F. P., *Prof.* 151 Meeting
- Gorham, S., *Sp.* 151 Meeting
- Gorman, E. J., *Jr.* *Fr.* 41 George
- Goss, H. E., *Sp.* 81 Waterman
- Goulett, Z. M., *W. Sr.* 118 Cushing
- Grant, A. N., *So.* H. 33
- Graves, W. P., *So.* H. 48
- Gray, C. S., *So.* H. 32
- Gray, L. S., *W. So.* 118 Cushing
- Green, A. D., *So.* C. 33
- Green, C. A., *Sp.* 159 Brook
- Green, F. O., *Jr.* 41 George
- Green, M. I., *Sr.* C. 33
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- Greene, E. P., *So.*
190 County, Attleboro, Mass.
- Greene, F. V., *Fr.* C. 12
- GREENE, J. F., *Assoc. Prof.*
Brown University
- Greene, R. D., *So.* 332 Olney
- Greene, R. D., *Fr.* C. 13
- Greene, R. W., *Jr.* *Sr.* 80 Waterman
- Greene, U. M., *W. So.* 125 Governor
- Greene, W. C., *Jr.* *So.* C. 9
- Greenstein, J., *Fr.* 177 Dudley
- Gregory, K. K., *Fr.* 3 De Foe Pl.
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- Grimm, G. W., *Jr.* *Sr.*
104 Waterman
- Grimshaw, H. R., *So.* M. 323
- Grindle, H. L., *Sp.* 104 Waterman
- Grinnell, F., *Jr.* U. 17
- GRISWOLD, Miss G. T., *Loan Desk*
Asst. 196 Blackstone Blvd.
- Gross, A. L. M., *Fr.* C. 22
- Gross, F. L., *Fr.* C. 32
- Grossman, S. S., *So.*
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- Grunewald, E. F., *Fr.* 64 College
- Guerin, F. W., *So.* 115 Waterman
- Guild, C. J., *So.* 108 Waterman
- GUILD, F. T., *Registrar; Sec'y of*
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 Guillemette, D. V., *So.* 70 Magill, Pawt.
 Gulian, M., *Fr.* S. 3
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 Gup, S. M., *Gr.* 673 Public
 Gwynne, A. E., *Jr.* 54 College
 Hackett, J. T., *So.* 31 Franklin, Bristol
 Haddleton, F. C., *Sr.* 81 Waterman
 Hadfield, T. R., *Fr.* H. 1
 Hagan, J. H., Jr., *Fr.* 40 Carlisle
 Hagstrom, E. L., *W. Fr.* 11 Manning, Pawt.
 Haley, C. W., *W. Jr.* 457 Friendship
 Hall, D. J., *Sr.* S. 5
 HALL, J. A., *Asst. Prof.* 91 Governor
 Hall, P. G., *W. So.* 98 Cushing
 Hall, R. P., *Sr.* 102 High, No. Attleboro, Mass.
 Hall, W. W., *Jr.* 80 Waterman
 Halliday, R., *Sr.* C. 8
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 Hammond, E. H., Jr., *So.* 4 Manning
 Hanchett, R., *W. Fr.* 19 Barnes
 Hanley, J. L., *Gr.* 119 Caverley
 HARKNESS, A. G., *Prof.* 7 Cooke
 Harper, W. J., *Sp.* Riverpoint
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 Harrington, A. H., *Gr.* Pontiac
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 Harris, B. P., Jr., *So.* 4 Manning
 Harris, H. G., *Sr.* 56 Waterman
 Harris, M., *Sr.* 56 Waterman
 Hart, L. W., *Fr.* 22 Broom
 Harvie, J. B., *So.* 81 Waterman
 Haskell, E. J., *So.* 34 Benevolent
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 Hassinger, M. G., *W. Fr.* 98 Cushing
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 Haywood, Miss C., *Gr.* 118 Cushing
 Heady, M. R., *W. So.* 118 Cushing
 Heeks, W. G., *Fr.* 472 East Ave., Pawt.
 Helfenbein, H. F., *Fr.* U. 59
 Heller, J., *W. Fr.* 98 Cushing
 Heller, S., *Sr.* 73 Staniford
 Henshaw, W. H., *Fr.* C. 22
 Hering, E. R., *Jr.* 80 Waterman
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 Hibbard, W. H., *So.* U. 18
 Hidden, D. B., *Fr.* M. 322
 Higgins, Miss B., *Gr.* 204 Angell
 Higley, D. I., *So.* H. 27
 Hildrup, Miss E. V., *Gr.* 204 Angell
 Hill, A. D., *Sr.* 175 Thayer
 Hill, C. C., *Sp.* 96 Waterman
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 HILL, Miss S. E., *Asst. Registrar* 238 Gano
 Hiller, R. B., Jr., *Fr.* 49 Waterman
 Hilton, S. W., *Sr.* 54 College
 Hincks, H. S., *Gr.* 14 Cooke

- Hobart, E. W., *Fr.* C. 31
Hobbs, J. B., *Gr.* Moses Brown School
Hobbs, W. C., *Gr.* 82 High, Bristol
Hoff, H. A., *W. Fr.* 118 Cushing
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Holland, V. F., *W. Sp.* R. I. Normal School
Holmgren, P. L., *Fr.* 45 Waterman
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Holt, W. S., *So.* 54 College
Honan, F. J., *Jr.* 242 Ives
Honan, M. G., *W. Sr.* Anthony
Hood, E. V. R., *Jr.* 115 Waverly
Hood, H. G., *Sr.* 80 Waterman
Hope, J. A., *W. Jr.* 98 Cushing
Hopkins, C., *So.* H. 18
Hopkins, R. A., *Sr.* H. 12
Hopwood, P., *Fr.* 65 College
Horr, G. E., *Fellow* Newton Centre, Mass.
Horton, R. F., *Fr.* 227 Armington, Edgewood
Horvitz, A. H., *So.* 122 Howell
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Hotchkiss, D. B., *W. Fr.* 130 Mineral Spring Ave., Pawt.
Hoving, W., *Sr.* 65 College
Howard, W. M., *So.* H. 43
Howe, L. H., *Fr.* M. 324
Howell, E., Jr., *Sr.* 80 Waterman
Howell, L. B., *Sr.* H. 22
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Hummel, E. A., *Fr.* U. 50
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HUNTINGTON, H. B., *Assoc. Prof.* 23 John
Huntoon, H. B., *So.* 156 Medway
Hurd, D. W., *Sr.* 17 Creighton
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Isé, H., *So.* 5 Lee
Isserlis, S., *So.* U. 48
Itschner, F. L., *Jr.* H. 30
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Johnson, H. F., *So.* 573 Public
Johnson, K. D., *Jr.* 48 College
Johnson, M., *Sp.* U. 12
Johnson, W. F., *Fr.* U. 60
Johnstone, G. C., *So.* 65 College
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62 James, E. Providence
Klingon, M. J., *Fr.* M. 433
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Lane, R. A., *Sr.* U. 57
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Langdon, H. G. T., *Sp.* 54 College
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Larrabee, C. B., *Sr., Gr.*
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- Litchfield, H. S., *Sr.*
30 Beckwith, Auburn
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- McCormick, M. L., *W. Fr.*
98 Cushing
- McCormick, W. B., *Fr.* 166 Sixth

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 McKenny, R. C., *Jr.* 104 Waterman
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 McOsker, F. E. C., *Sp.* C. 24
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 Mackenzie, J. W., *So.* 56 Waterman
 Mackintosh, B., *Jr.* 56 Waterman
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 Marks, W. A., *So.* 287 Brook
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 Marto, J., *Fr.* C. 17
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 Massaniso, F. P., *So.* 315 Atwells Ave.
 MASSEY, E. R., *Instr.* 203 University Ave.
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 Mathus, K. H., *Sp.* 39 Henry, Edgewood
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	260 Park Pl., Woonsocket	Mogelever, J. H., <i>Fr.</i>	151 Lippitt
Maynard, G. J., <i>Sp.</i>	35 Wilson	Molter, H. N., <i>So.</i>	
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Meador, R. O., <i>Fr.</i>		Moody, A. B., Jr., <i>So.</i>	4 Manning
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Meyers, R. L., <i>Fr.</i>	H. 19	Moulton, F. G., <i>W. Fr.</i>	
Mikalsen, C. A., <i>W. Sr.</i>	98 Cushing		126 Pine, Pawt.
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Minard, E. A., <i>Jr.</i>	80 Waterman	MURDOCK, Mrs. J. S., <i>Adv. Council, W.</i>	
Minkins, R. J., <i>W. Sr.</i>			89 Keene
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	23 Elton	Murphy, L. K., <i>Sr.</i>	279 Benefit

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 Nason, W. C., *Sr.* 128 Ontario
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 Nelson, Arthur R., *Fr.* 283 George
 Nelson, G. N., Jr., *So.* 104 Waterman
 Newbury, H. M., *W. Sr.* 118 Cushing
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 Newsome, M. P., *Fr.* 236 Williams
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 Nightingale, I., *W. So.* 118 Cushing
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 Noyes, J. C., *Sr.* No. S.
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Hall, W. 98 Cushing
 Paige, F. F., *Fr.* C. 36
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 Palmer, E. S., *Jr.* 153 Congdon
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- Redding, L. L., *Fr.* H. 37
- Redding, W. F., *Gr.*
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- Reynolds, H. S., *Fr.* U. 26
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